April, 1958



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fentle Fels" liquid detergent of Fels & Co., tiladelphia, soon to be marketed nationally packaged in 12, 22 and 32 ounce metal cans opplied by American Can Co., New York. Illy lithographed can has non-drip plastic out. Consumer offers of five cents on 12 acce size, 10 cents on 22 ounce can and cents on quart size are aiding primary stribution efforts in all the market areas.



More REACTIVE

SOLVAY CAUSTIC POTASH

...produces MORE SOLUBLE END PRODUCTS!

Many users select caustic potash, rather than lower cost caustic soda, because it saponifies fats and grease more readily, and—most important—provides extra efficiency.

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We invite you to make your own test of Solvay Caustic Potash. Available in two grades—Technical and Mercury Cell—dry forms and liquid, in steel drums and tank cars.

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SOLVAY dealers and branch offices are located in major centers from coast to coast.

Mail now for test sample!



DM-4

SOLVAY PROCESS DIVISION



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Samples of Technical Grade Caustic Potash

- ☐ Flake ☐ Small Flake ☐ Solid ☐ Walnut ☐ Liquid, 45% strength
- ☐ Liquid, 49-50% strength
- Samples of Mercury Cell Caustic Potash
- ☐ Flake ☐ Liquid ☐ Caustic Potash fact book

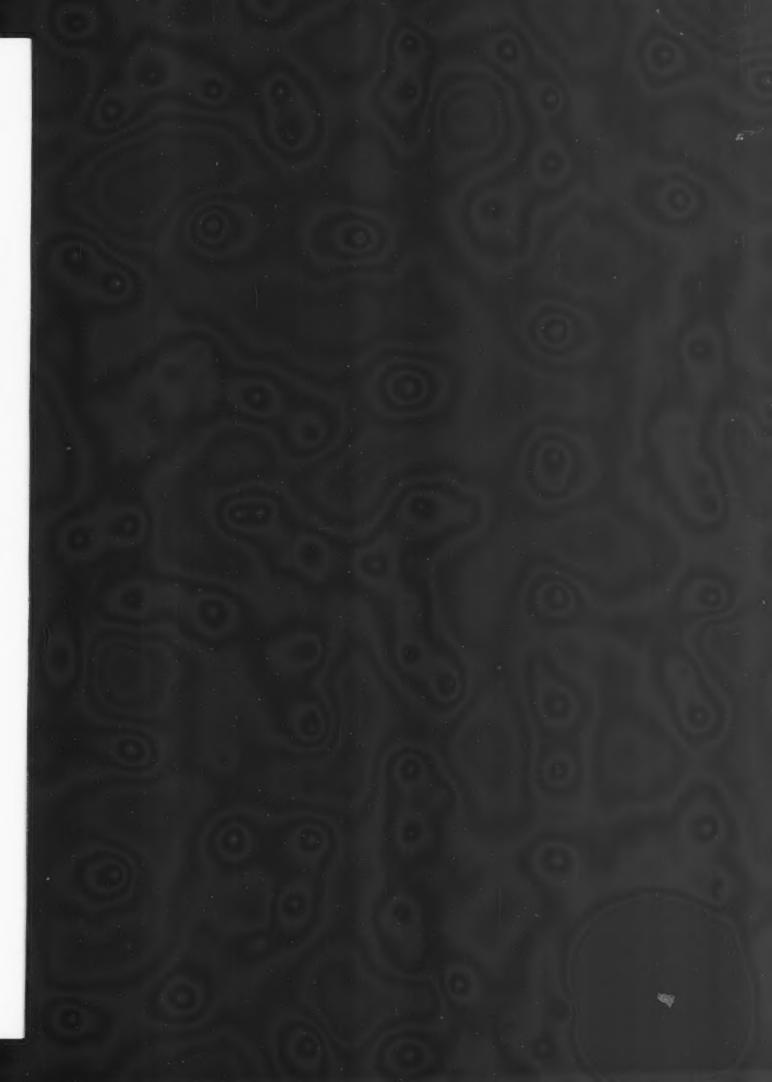
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For private brand resale buyers of waxes and kindred products

..Your Quality Guide

WATER EMULSION WAXES

Each of Candy's floor waxes are all-around top quality for certain traffic conditions. They impart the finest protection and beauty to floors for which best suited.

CANDY'S SUPREME (standard) **BRIGHT BEAUTY®** CANDY'S SUPREME Special WR SUPER CAND-DOX®

CAND-DOX® # CS (1101-H1) #6000

All Candy's products are available for private brand resale and are sold only through distributors except for experimental accounts in Chicago essential to research.

Beauty and Durability

Initial appearance is important, but for a waxed surface to remain beautiful, it must be durable. Durability depends not only on resistance to abrasion of traffic, but even more so on resistance to discoloring marks. Durability should be measured by how long the waxed surface maintains a nice appearance before complete removal and re-waxing is required.

Anti-Slip

Anti-slip, or reasonable safety underfoot, does not mean that the qualities of beauty and protection need be sacrificed. The proper balance—a wax film which is not excessively slippery, yet which is not tacky and does not collect dirt readily—gives the performance that answers the foremost original reason for use of a floor wax...beauty and protection.

Water Resistance

Frequent damp mopping or wet traffic can make water resistance very important. Over-doing this quality when no problem exists out of the ordinary, simply increases the difficulty of complete removal or applying multiple coats. Removability must be considered as important as waterresistance under most normal conditions.

Solid Content

The percentage of solid content is not nearly as important as the quality of the solids. Good quality indicates 12% of solids as the answer for most well planned maintenance programs. Two applications of 12% gives better results than one of 18%. "Washed out" floors and other special problems maintain better when more concentrated waxes are used. Overwaxing and resultant greater difficulty in removal for periodic maintenance may do more harm than good.

Carnauba Wax

The most important features of a good wax...all-around quality of performance...are built around Carnauba Wax. When refined and compounded with other additives and scientifically controlled in manufacture, Carnauba alone imparts the beauty and protection that makes the use of floor waxes both profitable and possible. Make-shift manufacture or over-emphasis on any one given wax feature should be avoided and proper care taken to provide for most satisfactory performance.

Other HIGHEST QUALITY products of CANDY & COMPANY, Inc.

CANDI-COAT 1000, WATER RESIN EMULSION

As a floor coating for use under specific conditions of continued main-tenance on certain types of floors this water resin emulsion has none of the faults associated with coatings of this type. It is the finest product in its class produced up to this time.

Bright Beauty WAX REMOVER & all-purpose SURFACE CLEANER

For removal of water-emulsion waxes from any floor without harmful effects. It is the perfect maintenance program wax remover and all-purpose surface cleaner. Pleasant odor, crystal clear color and thorough cleaning action with all types of equipment. Unaffected by hard freezing. Furnished ready for resale or in concentrated form for local packaging...nothing but water to buy or mix in.

Bright Beauty CREAM FURNITURE POLISH

A cream furniture polish that spreads easily, polishes without excessive effort to a deep impressive lustre. Permits repeated repolishing with a dry cloth, thus saving many re-applications. A very economical polish of the very highest quality.

Bright Beauty PASTE WAX

Properly blended and refined from excellent quality solids and solvents that produce the best drying time and evaporation. Easy to handle, having "creamy" consistency and stability that lasts throughout storage and

Bright Beauty LIQUID (spirit) PREPARED WAXES

A complete line of spirit dissolved waxes that meet a wide variety of demands for durability, color and types of usages. Each acts as a

cleaner" to keep surfaces waxed protected with a superb coating necessary for many applications such as wood and certain other types of floors; for bars, wallpaper, etc.

Bright Beauty GLASS POLISH & CLEANER and SILVER POLISH As a glass cleaner (pink color) it applies evenly with little effort, wipes off

easily with negligible "powdering" and produces an undeniable "feel" of cleanliness to glass. As a cleaner of silver, it polishes to a high lustre without abrasion and can even correct the abuses of scratchy "quickpolish" inferior products.

Bright Beauty DANCE FLOOR WAX

Does not "ball-up" and gather dirt that impregnates floors with hard spots difficult to remove...free from dusty effects. Its protective quality adds more "floor-years" to expensive ballroom floors.

Bright Beauty Heavy Duty PASTE CLEANER

Cleans and scours more effectively and quicker than most scouring pow-ders. Depending on application, it can clean to perfection even painted walls to provide a suitable repainting surface. 100% active, free from excessive abrasive qualities, it frees almost every surface from all foreign

CONTAINER SILK SCREEN LABELING

Now you can have dramatic, colorful labeling of your private brand name on all 55, 35, 30, 20 & 15 gal. drums and 5 gal. pails. This added service is accomplished right in our plant...your inspection invited...or

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SOAP and CHEMICAL SPECIALTIES

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Published monthly by
MAC NAIR-DORLAND COMPANY, Inc.

IRA P. MAC NAIR President

GRANT A. DORLAND Vice President and Treasurer

Publication Office 254 W. 31st St., New York 1, N. Y. Telephone: BRyant 9-4456

> Chicago Office 333 N. Michigan Ave.

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MEMBER



since 1934

Official Publication: Chemical Specialties Manufacturers Assn.

Subscription rates: U. S., \$4.00 per year; Canadian, \$5.00; Foreign, \$11.00 (2 years only). Copy closing dates — 15th of month preceding month of issue for reading matter and 5th of month preceding month of issue for display advertising. Reentered as second-class matter at the Post Office, New York, N. Y., under the Act of March 3, 1879. Single copies: Current issues 50¢; all back issues \$1.00. Claims for missing issues must be received within 60 days of mailing date.



The party's over. Everyone had a wonderful time and, of course, there are plenty of dirty dishes. Once they're picked up, though, the worst is over. Her mechanical dishwasher, plus washing compounds containing Victor chlorinated trisodium phosphate, will do the rest—a clean, sweet-smelling, antiseptic job.

How about your products? Whether they're for heavy-duty or light cleaning jobs, there's a Victor phosphate which may improve products or help develop new ones. As so many compounders know—it pays to see Victor. Victor Chemical Works, 155 N. Wacker Drive, Chicago 6.

Monday looks rosy. And why shouldn't it? Home laundering is almost effortless these days. Just toss the soiled clothes into a mechanical washer of the leading brands contain Victor sodium tripolyphosphate)...push a button, and the job is done - fast, safe ...add a heavy-duty detergent (most and satisfactory.

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qualities, many leading liquid soapers know, it pays to see Victor for tetra-For high solubility and water-softening add a few drops of water, and you're Liquid assets. Touch a soap dispenser, swimming in suds. No wonder liquid soap is popular in many wash rooms. potassium pyrophosphate.

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From NOPCO comes the Hyonic® PE Series of compounds to improve your

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As a group, ethylene oxide condensates of alkylated phenols have become one of the major classes in the surface-active field. The great range of oil solubility of the alkyl phenols, plus the infinite water solubility of ethylene oxide, when combined, provides almost limitless hydrophobic-hydrophilic ratios. Depending on the molarity of the ethylene oxide chain, products can be prepared which embrace the entire surfactant range.

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The lower numbered compounds in this series are useful as emulsifiers and emulsifier components. Alone or combined with anionics, they produce emulsions which are resistant to the salts of hard water. They are also used in dry cleaning solvent systems, where they improve water carrying properties and detergency. They also function as solvents and are included in waterless hand cleaning formulas.

Hyonic PE 30 is used extensively as a defoamer.

Hyonic PE 70. PE 90, PE 100 and PE 150 offer the greatest utility of this entire class of compounds. From among them is to be obtained the best performance available in detergency, wetting and foaming. All four may be used in emulsifier blend to achieve precise hydrophobe-hydrophile control.

Hyonic PE 70, in addition to exhibiting exceptionally good wetting and detergency powers, is a low foaming compound of a factor of real importance in many industrial and household detergent formulations.

Hyonic PE 90 and PE 100 rank as two of the most widely accepted detergents and wetting agents available today. Their properties give them almost infinite applications in industry.

Hyonic PE 150 performs well as a wetting agent and high foaming detergent. When blended with other nonionics, its very high cloud point contributes increased solubility and detergency at high temperatures and in more concentrated salt solutions.

Hyonic PE 200 and PE 300 are valuable as components of detergent or wetting systems at high temperature. They are also highly soluble in concentrated salt solutions.

CHEMICAL AND PHYSICAL PROPERTIES

Hyonic Compound								Moles— Oxide Ethylene	Cloud Point*	
Hyonic	PE	30							3	Insoluble
Hyonic	PE	50							5	Below 0°C
Hyonic	PE	70	*						7	13°C
Hyonic	PE	90							9	54°C
Hyonic	PE	100							10	65°C
Hyonic	PE	150							15	96°C
Hyonic	PE	200							20	100°C
Hyonic	PE	300							30	100°C

*Temperature at which a 5% aqueous solution becomes turbid on warming

Nopco manufactures a complete line of surface-active chemicals, and manufacturers who place a single order for all their needs make a dual saving—they qualify for quantity discounts and they save on freight.

Write today for samples and literature on the Nopco Hyonics PE series, And let Nopco chemists help tailor your product to your exact performance and sales requirements. They are waiting to go to work for you. Nopco Chemical Company, Harrison, N.J.



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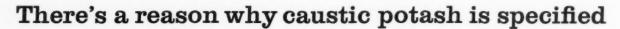
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hydraulic brake fluid

glass

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plating rubber chemicals soaps quality soft soaps petroleum processing cleaning compounds soil conditioners storage batteries textiles vitamins



In each of these uses caustic potash does something no other alkali can do

In some soaps, for example, it's the greater ability of potash soaps to lather in cold water that's important.

In other products, it's the greater purity of caustic potash that counts —or its greater reactivity or ability to absorb gases. Caustic potash also has many other "skills."

Making caustic potash takes skill, too. Getting it to you uncontaminated takes skill. Which is why you are sure of getting all the "extra" you pay for when you order NIALK" Caustic Potash.

You get the skill that pioneered caustic potash on this continent more than 50 years ago—the skill that now supplies a substantial part of U.S. requirements.

If you'd like to find out just why this skill has inspired such confidence, and how it might benefit your

processing, write for our technical data sheet and bulletin on Nialk Caustic Potash.

You can get Nialk Caustic Potash in these forms and grades:

Regular grade 45 to 52% Low-chloride grade 45%

Solid, flake, granular

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Synthetic Liquid
Floor Cleaners in
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Steel Drums...

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Your synthetic liquid floor cleaners formulated with NINOL 1281 can be packed in *plain* steel drums—which means substantial savings.

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And besides this important economy, you get the other famous NINOL 1281 advantages—excellent detergency, no residual film, high viscosity at low solids, controlled foam.

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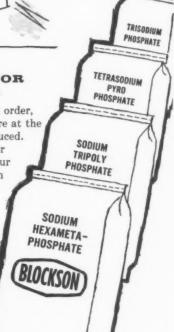
Blockson meets your routine needs with thrifty mixed car, mixed truck service. The saving on each chemical (carload rate) is always important. So is the advantage of acquiring so many phosphates and other chemicals with one phone call.





A RUSH SERVICE FOR PRODUCTION PEAKS

When you call Blockson for a rush order, the man you talk with is right there at the plant where the chemicals are produced. There is no plant-to-plant relay nor branch-to-home office time lag. Your order speeds its ways to completion as soon as you hang up.



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Tetrapotassium Pyrophosphate • Sodium Fluoride • Sodium Silicofluoride • C-29 Sequestering Agent • Teox 120 (Nonionic Surfactant) • Hydrofluoric Acid • Sulfuric Acid

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resembles the fragrance of the bergamot oil, along with a soft fruitiness and a delicate, woody background.

DRAGO-JASIMIA

to accentuate fine flower scents particularly for jasmin proven essential in deluxe perfumery.

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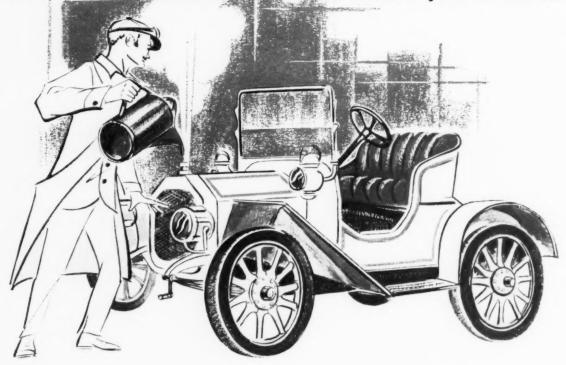
provides a typical fecal note with a warm animal background and a delicate woody note.



DRAGOCO INC.

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there's no substitute for water when you need it!



but when it's t.s.p. you want - switch to ...

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You're pouring money down the drain if you use trisodium phosphate crystals where anhydrous would do just as well. You could save money two ways by switching to Westvaco TSP Anhydrous.

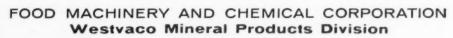
In the first place Westvaco TSP Anhydrous costs less than t.s.p. crystals—\$1.64 less per 100 pounds for the same Na₃PO₄ content. Second, since crystals are 56.9% water,

your shipping costs are 56% higher on crystals than on Westvaco TSP Anhydrous.

Now, we've nothing against water when it's needed. But if you can save two or three dollars per hundred pounds on Westvaco TSP Anhydrous, why not do it?

Your nearest Westvaco office will gladly figure the exact arithmetic for you so you can start saving now.

Putting Ideas to Work



General Sales Offices: 161 E. 42nd STREET, NEW YORK 17

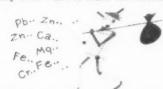


CYQUEST 40*

Breaks Specification Barriers by "Braking" Troublesome Metal Ions



When the answer to that question makes buyers unhappy, and salesmen reach for tranquilizers, a special type of chemical "additive" may be able to perform a rescue act. This hero specializes in ferreting out those metal ion impurities that prevent materials from passing purchasing specifications. By a novel type of chemical legerdemain, ionic villains are made to disappear, and stay "disappeared," so that discoloration, precipitation, odor — or any type of degradation caused by multivalent metal ions — is eliminated in processes and products. These ions, you see, are now tied up so securely in stable chemical complexes that they couldn't do harm if they tried . . . and we doubt that they even want to make the effort.



When metals go aroving

We are describing CYQUEST 40 Sequestering Agent — a sodium salt of ethylenediamine tetraacetic acid (EDTA). It is often called on to control these "devilish" iron ions . . . and also the nickel and copper that seem so prone to leave their blissful metallic state for wild adventure in the product streams. But CYQUEST 40 is equally useful in controlling over a dozen other overly sociable di- or trivalent metal ions that cause woe.



Do it now...or do it later

The effectiveness of CYQUEST 40 can be deduced from two chemical facts. First, each one of its molecules seizes on a metal ion in less time than it takes to say "tetrasodium ethylenediamine tetraacetate." Second, these chelate complexes are remarkably stable to heat and to wide pH ranges. This means that you need only as many moles

of CYQUEST 40 as you have moles of metal ions present. It means, too, that CYQUEST 40 can be added at any time from the beginning to the end of a process... and whenever the process involves an aqueous phase, the troublesome metal ions will automatically be taken out of action.

Four examples of product upgrading

Let's look at some typical operations in which CYQUEST 40 can bring products into line with stringent specifications.

- In areas where water is "hard" or otherwise ion-contaminated, just meter CYQUEST 40 into the water supply. Not only is such treated water often equivalent to demineralized water for processing use... but it can also be made to have built-in protection against the unavoidable later introduction of metal ions.
- When organics are water-soluble, or contain water, CYQUEST 40 in the solution or water-phase can keep metal ions from reacting with the organic or from catalyzing other degradation reactions.
- Precipitates can be freed of metal ion impurities by adding CYQUEST 40 to the initial solution or precipitating agent. The precipitate forms as usual and the metal ions pass on through with the filtrate.
- Metallo-organics are sometimes carried over in distillation operations. CYQUEST 40 in the stillpot can prevent these volatiles from forming . . . and metal impurities are kept in the still bottom where they belong.



If there's a gleam in your eye...

Cyanamid, alone, offers EDTA-based sequesterants in polyethylenelined Liquipak drums. The 15-gallon drums have a collapsible, capped, flexible pouring spout that makes pouring a pleasure in lab or pilot plant. The 40-gallon drum is your most economical "package of sequestering action."

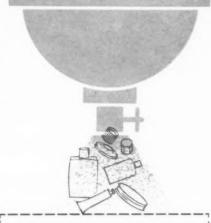
For those to whom practical application of CYQUEST 40 sequestering action is as yet a gleam in the eye, we offer samples and literature—via the coupon, which we invite you to tear out *now!*

SEQUESTERING
AGENTS

EYANAMID

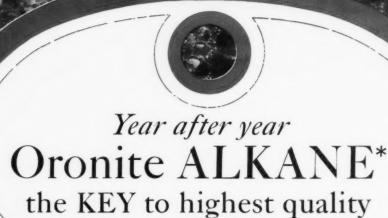
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SYNDETS

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You will also find Oronite foremost in providing assistance on detergent processing. Whatever you have in mind, chances are Oronite has the background experience and technical know-how to be of most help to you.

It will pay you to get the detergent story from the *leader*. Just contact the Oronite office nearest you.

*Trademark for detergent intermediate.



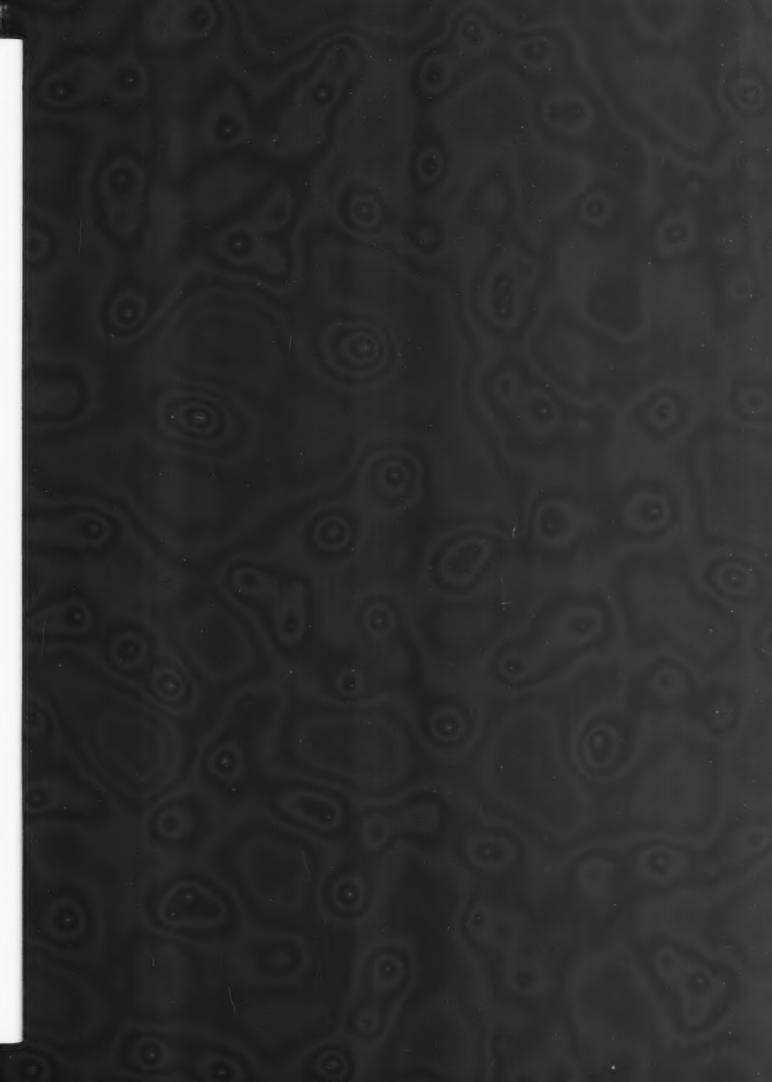
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Tulsa, Los Angeles, San Francisco, Seattle

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After Closing

Canadian Chemical Specialties Group

FORMATION of the Canadian Chemical Specialties Manufacturers was announced late last month at a special meeting held of the nine-man organizing committee, including A. Robins, Cartier Chemical Co., Ltd., Lachine, Que.; R. L. Jones, Colgate-Palm-



Arthur H. Carter

A. Robins

in Toronto. The new organization will be modeled after its American counterpart, the Chemical Specialties Manufacturers Association.

G. E. Flemming, Natural Products Corp., Ltd., Montreal, who guided the group through its formative stages, serving as chairman of an organizing committee, has been named president and director. The board of directors will consist of the remaining members olive, Ltd., Toronto; A. H. Carter, Sherwin-Williams Co. of Canada, Ltd., Montreal; G. H. Wood, G. H. Wood & Co., Ltd., Toronto; R. T. Howard, A. H. Howard Chemical Co., Ltd., Orangeville, Ont.; G. V. Jansen, S. C. Johnson & Son, Ltd., Brantford, Ont.; G. Lang, Connecticut Chemicals of Canada, Ltd., Toronto; and R. S. Sweet, Success Wax, Ltd., Quebec City, M. Chevalier is secretary-manager.





R. L. Jones



The main headquarters of CCSM will be in Toronto. However for the immediate future temporary headquarters will be maintained at 1005 Sherbrooke St., West, Montreal 2, Que. Organization of CCSM will consist of six divisions. They are soaps, detergents and sanitary chemical products; waxes and floor finishes; disinfecting and sanitizing chemicals; insecticides; automotive; and aerosol. Each division chairman will automatically be appointed to the board of directors.

Other officers of the new group will be first vice-president, second vice-president, secretary and treasurer, who in addition to the president and five members of the board, will be elected at large by the membership.

Primary functions of the Canadian Chemical Specialties Manufacturers are similar to those of CSMA. They include the sponsoring of scientific research, collecting and disseminating information of interest to firms in the soap, detergents or chemical specialties field and related industries, promoting use of such products through advertising, consumer education, and similar methods, assisting and advising members in legislation, precautionary labeling, toxicity, statistics, planning special meetings and issuing books, manuals and leaflets dealing with codes and product specifications.

The first annual meeting of CCSM will be held at the Queen Elizabeth Hotel, Montreal, Nov. 13 and 14.

CSMA Services for Canada

Although the new Canadian Chemical Specialties Manufacturers association, formed at Toronto, March 24, is a wholly independent organization, it established a working arrangement covering some of its activities with the American trade group, Chemical Specialties Manufacturers Association. CSMA will supply the membership of the new Canadian association with its various services including copies of CSMA official proceedings, issued

twice yearly after each meeting, applicable CSMA bulletins, all CSMA publications, CSMA testing materials and other technical data, according to H. W. Hamilton, secretary of the American association.

The arrangement which has been consummated by the two associations, and approved by their respective boards, also provides for extension of courtesy of attendance at both association meetings by members of the other group at regular membership rates and charges. Each association will function wholly independently of the other with no cross representation on committees or other governing bodies. Nothing in the arrangement precludes Canadian companies from being members of the CSMA under foreign membership classification. CSMA at present has a considerable number of Canadian members. The arrangement between the two associations is merely covered by mutual letters of understanding.

Wasserman in New Post

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Kurt J. Wasserman has been named technical director of Wax & Rosin Products, New York, exclusive distributors of waxes for Farbwerke Hoechst AG., Gersthofen, West Germany. Mr. Wasserman previously had been chief chemist and production manager for Trio Chemical Works, Brooklyn, N.Y. He also had served as general manager for Aerogon Chemical Industries, New York, and vice-president and technical director of Dura Commodities Corp.

Kurt J. Wasserman



CSMA Sets Program for Cincinnati Meeting

DETAILS of the tentative program for the 44th annual meeting of the Chemical Specialties Manufacturers Assn., to be held at the Netherland Hilton Hotel, Cincinnati, were announced late in March by H. W. Hamilton, secretary.

N. B. Tucker, director of the research division of Procter & Gamble Co., Cincinnati, will speak at the group luncheon, Tuesday, May 20. His subject will be announced later. Another luncheon speaker, Louis Ware, president of International Minerals and Chemical Corp., Chicago, will address the group following luncheon on Wednesday, May 21.

In addition to separate or joint meetings of the six divisions of which C.S.M.A. is composed, there will be a general session on the morning of Wednesday, May 21. Although the meeting gets under way formally on Tuesday, May 20, the previous day a large turnout is expected for meetings of the board of governors, scientific and technical and other committees and subcommittees of C.S.M.A.

New members of the administrative committees of the six divisions will be elected to take office following the December annual meeting. A nominating committee to select a slate of officers and directors to serve in 1959 will be named at the midyear meeting in Cincinnati.

Other highlights of the meeting include the long awaited report on the acrosol survey for 1957, as well as the annual insecticide survey. These will be presented, respectively, by Fred G. Lodes, Lodes Aerosol Consultants, Inc., New York, and George W. Fiero, Esso Standard Oil Co., New York, and second vice-president of C.S.M.A.

Featured speakers for the general session, Wednesday morning, May 21, include Reuben B. Robertson, Jr., president of Changion Paper and Fibre Co., Hamilton, O., and W. Michener of Chase Manhattan Bank, New York, In-

dividual and joint meetings of CSMA's six divisions will occupy all of Tuesday, May 20, and the afternoon of Wednesday, May 21.

The Waxes and Floor Finishes Division will hear a paper on "Refined Shellac in Self-Polishing Floor Wax Formulations, I-Formulation Variables," by B. G. Brand, J. M. Williams, and E. R. Mueller, all of Battelle Memorial Institute, Columbus, O., to be read by Benson G. Brand. A presentation entitled "Emulsion Polymerization for Floor Polishes," by M. Potash, H. Naidys, and H. Merken, of Polyvinyl Chemicals, Inc., Peabody, Mass., will be read by Max Potash, William S. Frederick of Liberty Mutual Research Center, Hopkinton, Mass., will speak on "The Development of the Portable 'Slipmeter.' " E. W. Ingram of Sales Analysis Institute, New York, and G. L. Brown of Rohm & Haas Co., Philadelphia, are also scheduled to present papers before the Wax and Floor Finishes Division. Their subjects have not yet been announced.

The Insecticide Division will hear papers by Richard E. Zdanowski of Rohm & Haas Co. and by Dr. Mitchell Zavon of the University of Cincinnati's department of preventive medicine and industrial health.

The program of the Aerosol Division includes the following presentations: "Microbiological Aspects of Pressurized Foods," by D. W. Riester, Central Division Laboratory, American Can Co., Maywood, Ill.; "The Use of Chlorothene in Personal Aerosols," by A. E. Schober, Dow Chemical Co., Midland, Mich.; and "Economics of Retailing Aerosol Products," by Eugene Lesher, Boyle-Midway, Inc., New York. These speakers will be preceded by W. E. Graham, Clayton Valve Co., giving his address as chairman of the aerosol administrative committee. Norman O'Dell of G. M. Basford Co., New York, will report on the first year of the aerosol publicity program. A joint session of the Aerosol and the Insecticide Divisions will hear Røbert L. Ackerly of Cummings, Sellers, Reeves and Conner, Washington, D. C., on "The Past, Present and Future of Labeling Pressurized Containers and Insecticides" and H. F. Pierce of Hercules Powder Co., Wilmington, Del., on "The Use of Diethyl Toluamide Insect Repellent in Aerosols." A paper on "Instrumentation for Use with Fluorocarbons," by E. E. Husted, Union Carbide Chemicals Co., New York, has also been scheduled for the joint session.

The Soap, Detergents and Sanitary Chemical Products Division will hear a paper on "Large Scale Recovery and Uses of a Lanolin-Type Product From Tall Oil," by M. G. Bestul, I. A. Stine, and J. C. McManus, West Virginia Pulp and Paper Co., Charleston, S. C., to be read by Mr. Bestul. A symposium on amine derived surface active agents will be moderated by Herbert Sanders, Stepan Chemical Co., Chicago. The following subjects will be covered: cationics or higher fatty acid amides; fatty alkanolamides; sulfonated amides; amphoterics; and protein-derived surfactants. Speakers have not been announced as yet. A joint session of the Soap, Detergents and Sanitary Chemical Products Division with the Waxes and Floor Finishes Division is tentatively scheduled to hear J. C. Harris of Monsanto Chemical Co. on "Micelles-Aggregations of Molecules in Surfactant Solutions."

Avon Names Two Officers

Election of Charles E. Dykes as controller and S. Arnold Zimmerman as secretary of Avon Products, Inc., New York, was announced recently. Prior to joining Avon, Mr. Dykes had been with the Cooperative Grange League Federation Exchange, Inc., Ithaca, N. Y., as controller and budget director. He had been with that organization since 1939. Mr. Zimmerman formerly was associated with Wallace & Tiernan, Inc., Belleville, N. J., as chief counsel and head of the legal department.

Alsop Elects O'Dette

Election of Stanley R. O'Dette as a vice-president and director of Alsop Engineering Corp., Milldale,



Stanley O'Dette

Conn., was announced recently. He will continue as chief engineer, a post he has held since January, 1957. Mr. O'Dette previously had spent 30 years in the petroleum industry, 28 of them with Standard Oil Co. of New Jersey. During his last 10 years with Standard Oil he was engaged in technical service on industrial applications throughout the western hemisphere, Iceland, Europe and North Africa. Alsop manufactures a wide line of filters, and mixing and processing equipment and related items.

Columbia Advances Nelson

Appointment of Leroy C. Nelson as assistant district sales manager for the New York office of Columbia-Southern Chemical

Leroy Nelson



Corp., Pittsburgh, was announced last month by W. F. Newton, sales director. For the past six years, Mr. Nelson had served as sales representative in the New York area. He joined Columbia-Southern in 1938 as a development engineer at the Barberton, O., plant, and later was a technical sales engineer.

Jefferson Names Two

Appointment of John G. Sibley to the newly-created post of southern regional manager and William P. Thorp III as resident salesman at the Charlotte, N. C., office, was announced recently by Jefferson Chemical Co., Houston, Tex. Mr. Sibley, who joined the company in 1953 as a salesman, previously was district sales manager at Charlotte. Mr. Thorp joined Jefferson in 1957.

Toilet Soap Spec.

A Federal Specification P-S-617 for Soap, Toilet, Hard, Soft, or Sea Water is proposed and will supersede Military Specification MIL-S-13055 (QMC), dated Sept. 28, 1953. Major changes include: elimination of reference to framed or milled types; revision of certain test methods; inclusion of complete and detailed quality assurance provisions; and revision and simplification of packaging requirements and revision of packing requirements.

Proposed Federal Specification F-M-200, Metal Cleaner, Liquid, Phosphoric Acid Base, supersedes Military Specification MIL-M-12207A, dated Feb. 18, 1953. Revisions are being considered. Interested companies who have not received copies of the proposals are invited to communicate with Bernard H. Martin, chief, Standardization Section, Applications and Engineering Branch, Chemicals & Plastics Division, H.Q. Quartermaster Research & Development Command, U. S. Army, Natick, Mass. H. W. Hamilton, C.S.M.A. secretary, would appreciate receiving duplicates of any comments members may address to Mr. Martin.

Woolley Leaves Babbitt

John L. Woolley late last month resigned as a vice-president and director of sales of B. T. Bab-



John L. Woolley

bitt, Inc., New York. No successor has been named as yet. Mr. Woolley's future plans were not disclosed. He had been with Babbitt for more than 21 years.

As sales director, a post he had assumed only at the beginning of this year, Mr. Woolley was responsible for all phases of the company's domestic, foreign and institutional sales. Prior to that, he had been vice-president of marketing.

Mr. Woolley joined Babbitt in 1936 when the Holly Products Co., Vernon, Calif., of which he was sales manager, was purchased by Babbitt. After serving as Pacific Coast regional manager, where he directed sales of "Bab-O" and of "Glim," he became national sales manager. In November, 1956 he was named assistant vice-president and assistant director of marketing. In November, 1957 he became assistant sales director, supervising marketing and sales of all lines of the firm's grocery products.

Revised Antifreeze Guide

The first revision of the compilation of state laws and regulations affecting quality and sale of antifreeze and brake fluids was published recently by the Chemical Specialties Manufacturers Association, New York. The original edition of the guide was issued early in 1957. The revision contains all

additional laws and regulations up to Jan. 1, 1958. Also included are revised reference charts of registration requirements, filing dates and fees. One copy of the revision will be distributed free to CSMA members. Additional copies cost \$1.50 each for members and \$2.00 for non-members. Price of the complete edition, which includes this first revision, is \$4.50 for members and \$6.00 for non-members. Further information may be obtained from CSMA, 50 E. 41st St., New York 17.

de Laire Leaves U. S.

Francois de Laire, head of Fabriques de Laire, Paris, France, manufacturers of perfume specialties and aromatic chemicals, left the United States last month for France after a five-week visit to this country. He was accompanied by his son, Antoine. Mr. de Laire brought with him several of the latest creations of the company's perfume laboratories, which he said have sold successfully in Europe. This is Antoine de Laire's second trip to the U.S. He was here in 1955 with de Laire, Inc., New York, studying the American perfume and soap industries.

Carbide Names Duncan

Robert L. Duncan has been named sales manager of Union Carbide Chemicals Co., New York,



Robert L. Duncan

it was announced last month. He previously had been assistant sales manager.

With Carbide since 1937, Mr. Duncan has served continuously in sales capacities. He became manager of the Albany district in 1946 and of the Detroit district in 1949.

In 1954, he was made eastern division manager. He assumed his most recent post in 1956.

Sales clinic, held recently by laundry chemical department of Cowles Chemical Co., Cleveland, at the LaSalle Hotel, Chicago, was second of its kind sponsored by company in recent months. Under the direction of W. J. Schleicher, department manager, and R. G. Johnson, department sales manager, the meeting featured "brain storming" sessions on "How to Get the Order" and "How to Overcome Objections." New products soon to be introduced by the company also were discussed. Cowles' western division representatives attending the clinic include: first row seated, left to right, Louis Houston, Mr. Johnson, Mr. Schleicher, William Clossey, Cliff Philip and Ralph Thurston. Second row, standing left to right are: Wes Jennings, Ed Gailstead, Obie White. Walter Brawner, Peter Schleicher, Robert Evans, Cotton Wiginton and Jerry Friedman. Third row, standing left to right are: Mark Frix, Pat Kack, Jim Pyan, Marshall Benham, William Bouchane, Warren Peterson, Henry Klukis, Milton Ehrenreich, El Davies and Jim Berke.



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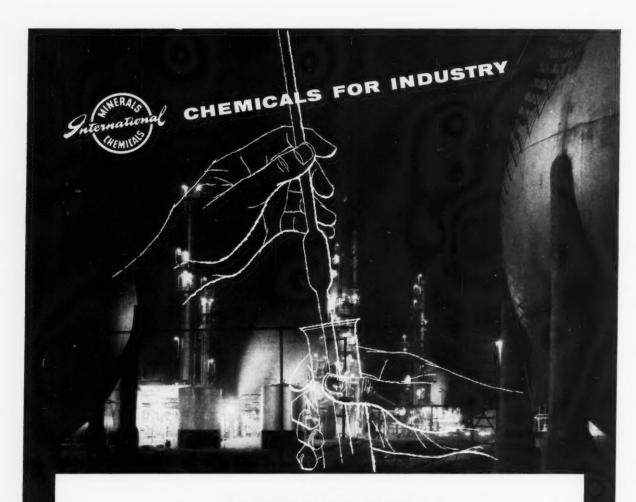
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4	Surface Active Agents and Detergents, by Schwartz-Perry. Two volumes. Volume 1: 590 pages, 51 illus., 4 tables. Covers pro- cesses for synthesizing and manufacturing surface active agents, physical chemistry of surface active agents and practical ap-	□ 12.	ucts. Price: \$25.00. Industrial Oil and Fat Products, by Alton E. Bailey. 991 pages, 164 illus. 133 tables. Covers the nature of fats and oils, their
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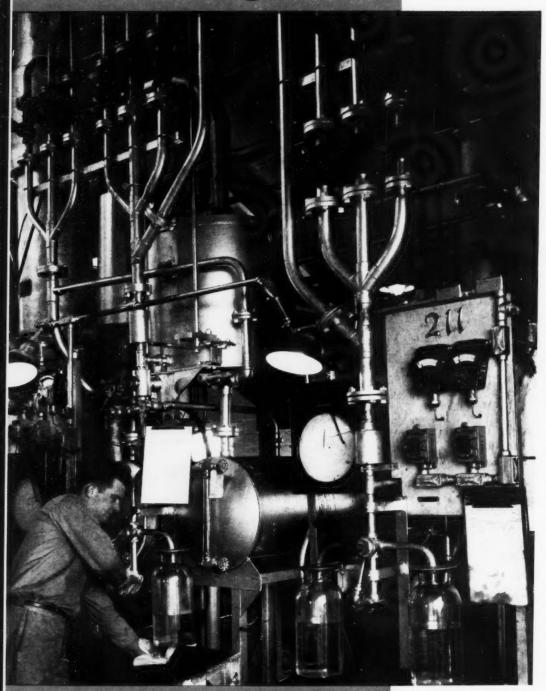


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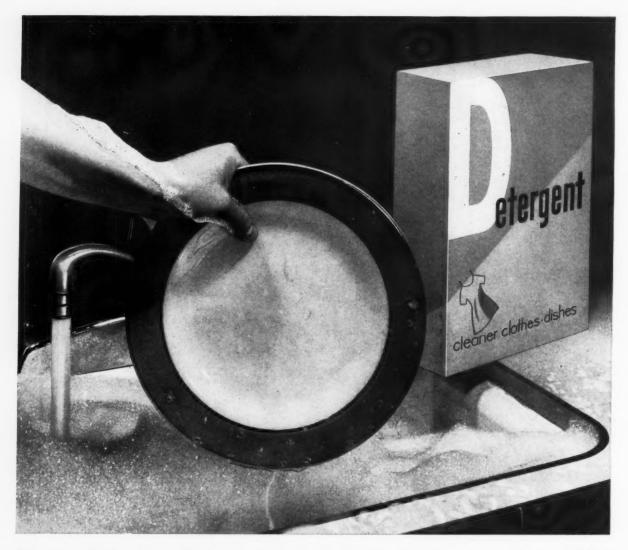
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Adol 85 was tailored for use in areas where the best never before has been obtainable except at prohibitive prices. Now a new manufacturing process produces oleyl alcohol of unusually high quality . . . but in a practical price range!

Here are a few Adol 85 features: light color, remarkable lack of odor, stability against oxidation and rancidity, resistance to hydrolysis, extreme mobility, superb plasticizing qualities, compatibility with nearly all waxes and emulsifying agents commonly used, and active penetration into capillary (and even sub-capillary) crevices.

In addition to these features, Adol 85 contributes important aesthetic advantages to cosmetics. It produces a remarkable, pleasant, new "feel" in preparations applied to the skin. It improves ease of application, leaves no sensation of excessive wetness or gumminess, and imparts to the skin a feeling of smoothness, freshness, and suppleness which lasts and lasts.

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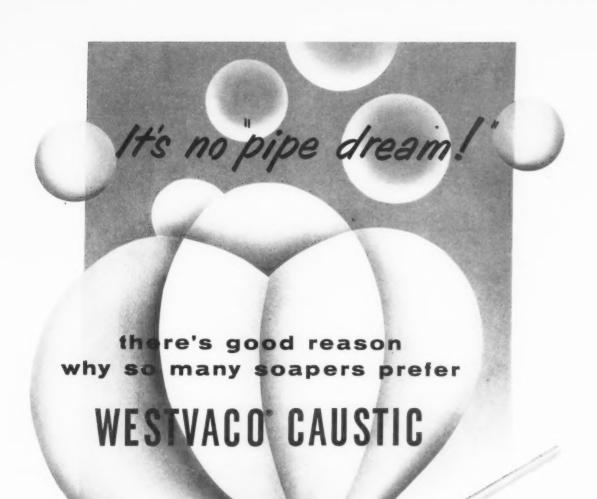


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Liquid 73% Liquid 50%, Regular and Low-Chloride Grades Flake, Solid and Ground, 76% Na₂O

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45% and 50% Liquid Flake and Solid Westvaco quality results from the unexcelled efficiency of our recently expanded caustic-chlorine operation—the newest and most modern facility in the industry.

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In Regular, Medium, and Low-Foaming Detergents .THE KEY IS CMC

Regular, medium, and low-foaming detergents all clean more effectively and thoroughly when Hercules CMC is included. CMC's particle-suspending properties help loosen and rinse dirt down the drain; dirt is never redeposited on clothes. That's why Essential Chemicals Company of Milwaukee, Wisconsin selected Hercules CMC for its "April," "Trust," and "Kenmore" detergents.

Essential's full line of detergent products supplies the right cleanser for hand washing fine fabrics, family laundry, or general cleaning . . . and they all depend on CMC for thorough cleansing action.

If you haven't found out yet how CMC can improve your product, write to Hercules for complete technical information and testing sample.

Virginia Cellulose Department

HERCULES POWDER COMPANY

900 Market Street, Wilmington 99, Delaware



... in brief

as the editor sees it . . .

on the market show varying degrees of shrinkage and discoloration when treated with solvent cleaners and solvent based waxes. This does not apply to all vinyls, only to one or two types, types where the tile manufacturer has apparently changed his formula during the past year or so. And, strange as it may seem, these are not the cheaper types.

This situation which was brought to light recently by the Waxes and Floor Finishes Division of CSMA poses a serious problem, not only for the tile manufacturers, but for the makers of solvent waxes and cleaners. Either or both are on the spot when it comes to answering complaints for damage to vinyl floors. Invariably the finger is pointed at the manufacturer of a cleanser or floor wax if the floor surface shows damage. In this instance, however, such manufacturers are in the clear. Their products are and have been used for some time on most vinyls with complete satisfaction and no damage.

Changes which have been made recently have been in the composition of certain vinyl floorings, not in the cleaners or waxes. So shrinkage or discoloration stems from the tile itself. A warning to wax and cleaner compounders who are not cognizant of this problem is in order. Damage complaints may or may not be justified.

特 跨 特 特 特

P. & G. came on the market with "Dreft," the first commercial marketing, as far as we know, of a small-package synthetic detergent for household use. The new product was designed for lighter laundry tasks and dishwashing. Shortly thereafter, the liquid shampoo, "Drene," was marketed. And thus began what in reality became a complete revolution in the market for soaps. No need here to review the

details. Everybody who ever had a stake in the soap business knows what has happened.

Both of the original products were based on sodium lauryl sulfate. Today, there are dozens of other detergent raw materials. Before detergents, tallow and caustic soda were the industry's basic materials. Today, base materials stem from innumerable chemical sources with petrochemicals, unheard of in 1933, supplying their share.

Back before 1933, soap dominated the household market. Today it has only about ten per cent of the small package market left. Detergents have taken over the balance. They licked the hard water problem for millions of American housewives.

Little did we think 25 years ago that soap whose method of manufacture had not changed in a hundred or more years before that time, was on the way to pass out of the household detergent picture. But it happened. Which makes us wonder what we may be in for during the next quarter century. Another revolution?

HEALTH CODE . . . New York City is rewriting its sanitary code. Under the proposed draft, many new regulations cover the packaging, labeling, sale and use of various insecticides, rodenticides, fumigants and other chemical specialties. New restrictions are placed on arsenic, phosphorus and fluoride compounds, and on powdered DDT. The sale of caustic soda in small household packages as commonly used for drain pipe opener is completely banned. Nothing more than five per cent caustic soda may be sold.

In addition to product restrictions, the new proposed code provides that insecticides and fumigants sold in New York must be registered under the Federal Insecticide, Fungicide & Rodenticide Act if shipped in interstate commerce, or if not,

to make any mixture a better mixture

all signs point to

Nacconol

Fourteen different physical forms of NACCONOL . . . the pioneer detergent . . . to fit every need of the industry.

Currently, special interest is on:

NACCONOL DBX

handling. More salable mixes.

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Unique, super-dense bead. The outstanding liquid deter-first 40% active alkyl aryl sulgent. Looks clean, smells clean. fonate that is as dense as most Excellent foaming. Very low flake materials. Dustless, free- haze-point. Emulsifies grease flowing, non-caking. Easier and oil. Compatible with anionic and non-ionic materials.

Samples of all of the NACCONOLS are readily available. Your request will be filled promptly.





they must be approved by the N. Y. Department of Health. New and more stringent label requirements for hazardous substances are included. Much from the American Medical Association model hazardous substances law is included.

Because if such a new code were adopted by New York City it might be copied by other American cities, its significance to all manufacturers throughout the country is apparent. Trade opinion holds that the proposed draft is "loaded with dynamite" for the chemical specialties industry. Hearings will eventually be held and it is believed opposition will be strong.

Howard columnist who writes from Washington, recently dug his spurs deep into cosmetic, drug and shave cream advertising. For the first time in his life, Mr. Othman observed that shaving is a joy to some men who leap out of bed in the morning happy as larks who just can't wait to mow their facial lawns. Then he tells about the picture of a homely girl who daubs her eyebrows and lashes with a black goo,—and suddenly, she's beautiful. And he gives "moisturize," the new word which the cosmetic blokes have added to the language, a quick poke in the ribs.

To just about everybody we've ever run across, shaving was, is and always will be a plain pain in the neck. Outside of a fifteen year old kid with his first razor, nobody likes to shave. Yet, these happy boys in the advertisements are overwhelmed with joy at the very thought of shaving. Sort of silly, isn't it? Couldn't the agency boys figure out a more true-to-life sequence? Maybe their mentors among the manufactures for whom they write copy should step in and call a halt to this silly mush. For silly it is. Makes the manufacturer of the product look like a jerk too!

wage-price spiral continues as a dangerous threat to our economy in spite of the current recession, according to Lansing P. Shield, president of the Grand Union Company. The present recession may slow the pace of the upward spiral, but will not halt it, as was witnessed

by the recent rise of living costs to an all-time high in the face of declining industrial production. The power of labor groups to demand and receive wage increases without relation to industrial productivity or general business is the nub of the situation. And the ability of pressure groups to obtain special privileges is a further factor.

Mr. Shield holds the answer is for American business to accept the responsibility for moral leadership in the fight against inflation inasmuch as our economy is shaped around free enterprise. Which is all to the good for a person of high ideals and morals. But to a businessman in a daily dog-fight to survive, possibly with labor holding a gun to his head, we fear an appeal for "moral leadership" will bring but a sardonic grin or fall altogether on deaf ears. He knows that labor has the bit in its teeth, and inflation or not it intends to keep it there as long as possible. Sad as we are to admit it, we feel that a genuine depression is all that will ever bring labor, and a goodly part of industry too, to its senses and halt the upward spiral.

IMITATION . . . If any manufacturer puts out a new product which seems to have even the most remote chance of success, the odds are probably ten to one that some other manufacturer will rush a similar product to market post haste. As we see it, the greatest bugaboo of most manufacturers is the everlasting fear of being left at the post in some new product development. And this fear seems to make some of them do peculiar things marketwise. Behind it may lie the reason why so many new products, obviously untested and untried, fall flat on their faces as soon as they hit the market.

The list of new things right in the field of household chemical specialties and toilet articles which have flopped in the past 10 years is as long as one's arm. Sure, we know all about what a large part of the market has been taken over by products which were not on the market 10 years ago. But most of these were well tested items both technically and marketwise, not just quickie imitations of something already on the market, not just something put out because a competitor had put out a new product.



Once in a blue moon a really fragrant synthetic arrives—Lilial*—Givaudan's contribution to floral

naturalness!Lilial-a pure aldehyde with an intense and diffusive note that recalls linden blossoms, with the emphasis on fragrance, represents a new high for synthetics in perfume elegance.

Lilial has remarkable tenacity and lends unmatched floralcy, intimate warmth and unique naturalness to almost any composition. On a perfume blotter it lingers for more than a month.

Unusually stable in soap, Lilial is long-lasting and diffusive. It is available in quantity—at a moderate price. No one synthetic has ever presented more desirable qualities to the perfumer.

Samples and technical data are available upon request.



GIVAUDAN-DELAWANNA, INC.

330 West 42nd Street New York 36, New York

as the reader sees it . . .

Wax Data Misleading

Editor:

We thank you for presenting in the January issue of Soap and Chemical Specialties the article by Daniel Schoenholz and George D. Burns, entitled "New Lanolin Fraction for Wax Dispersions." While we are very proud and happy that our "Duroxon" waxes are mentioned in this article, we must point out that the data presented, which shows the performance of "Lanfrax" in different wax compositions, are misleading. We say this, because Table III giving the compositions by weight of the various wax dispersions, shows that in each case, a totally different emulsifier system and a completely different wax blend were used. In three of the compositions, namely the polyethylene wax dispersion, the vegetable wax dispersion and the oxidized petroleum wax dispersion, the wax soluble resin called "Durex 219," is used, whereas this is omitted in the case of the oxidized Fischer-Tropsch wax dispersion. An analysis of the emulsifier system discloses the following:

Polyethylene Wax Dispersion: Oleic acid/2 amino acid/2 methylpropanol-1

Vegetable Wax Dispersion: acid/borax/morpholine

Oxidized Fischer-Trøpsch Wax Dispersion: Oleic acid/morpholine

Oxidized Petroleum Wax Dispersion: Oleic acid/borax/ amino 2 methyl-propanol-1

The differences which we have mentioned have a clear bearing on the performance of the ultimate composition, notably in the freeze-thaw stability, and on the gloss meter readings. The use of wax soluble resin definitely improves the freeze-thaw stability and furthermore improves the gloss meter reading. By omitting the

"Durex 219" in the "Duroxon" combination (oxidized Fischer-Tropsch wax) the performance data shown on Table V are adversely affected for oxidized Fischer-Tropsch wax.

Thus, the impression may be created that oxidized Fischer-Tropsch wax polishes fail to stand up under even one freeze-thaw cycle, and furthermore, that they have an inferior gloss.

In the interest of completing the findings presented in this article, we propose that you bring this to the attention of your readers.

> I. Y. Straus, Dura Commodities Corp. New York 7

Comparison Unintended

Editor:

Our article on "Lanfrax," which appeared in the January issue of Soap and Chemical Spe-

*

ctalities, was not intended to compare the merits of different kinds of polish materials or of different formulations. Its purpose was to explore the validity of an idea, viz.; the use of a sterol ester material as a supplementary emulsifier and to learn what effects on performance might occur. Whether or not any given wax showed good or bad behavior in some property should not be construed as a reflection on the wax.

Our aim was to use a variety of waxes and emulsifier systems in order to obtain a cross sectional view of the behavior of "Lanfrax" in as rapid a fashion as possible. That we did not use the best "Duroxon" formulas known to us is pure happenstance. We regret that this has caused Mr. Straus concern since it is certainly true that far better products can be prepared with the "Duroxons" than might be judged to be the case by those few who might use our article as a formulary.

DANIEL SCHOENHOLZ, Director, Product Development Dept., Foster D. Snell, Inc. New York 11

Generalissimo Francisco Franco, Chief of the Spanish State, receives delegates from 22 nations attending Fifth International Orthocide Conference in Madrid earlier this year. The week long conference was arranged under the auspices of California Spray-Chemical Cie. Francaise, a subsidiary of California Spray-Chemical Corp., Richmond, Calif. Below, left to right, foreground are: H. E. Weirenga, Calspray: Norbert B. Van Buren, president of Cal-France and conference chairman: Generalissimo Franco, and J. A. Macaya, Macaya S. A., Madrid.



What happens to soap held at 110° F. and 85% relative humidity for 6 weeks?

made with
ordinary
oleic acid
—complete
breakdown

made with

Armour

Neo-Fat® 94-04—

still fresh
as when
first made





Neo-Fat 94-04 is a uniform, ester-free, low titer light-colored Red Oil. This oleic acid is able to withstand 18 months' storage at normal room temperature without rancidity or oxidation.

The uniformity, purity and product stability of all the Neo-Fats are important reasons why Armour is your one best source for all fatty acids.



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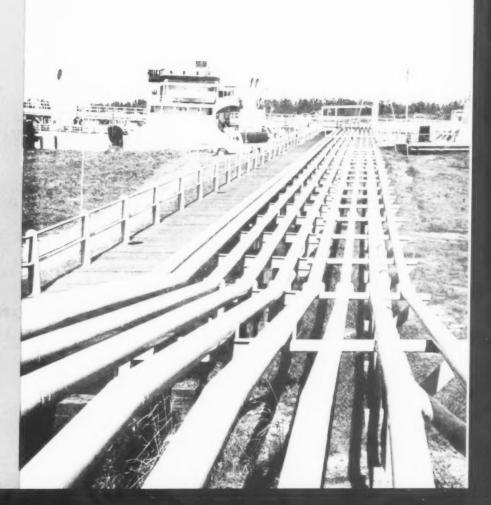
Detergents... Cleansers... Sonns

Six, eight and 10 inch pipelines, carrying tallow and grease, run from pump house to loading deep tank vessel at Avondale Terminal, New Orleans, owned by American Liberty Tank Terminals. Story P. 43.

Aerosols **Detergents** Dishwashing compounds Floor scrubs Glycerine Hand cleaners Laundry soaps Liquid soaps Metal cleaners Potash soaps Scouring cleansers Shampoos Shave products Soap powders Starch Steam cleaners Medicinal soaps **Textile detergents Toiletries**

Toilet soaps

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Tallow and Grease World Survey

Preliminary report on results of world survey of production, consumption and trade in grease and inedible tallow in 1956. Data obtained by commercial and cultural attaches in 45 countries

By Carroll V. Danielson*

Food Industries Division
Business and Defense Services Administration
U. S. Department of Commerce

OME comments appear to be in order on the preliminary results of the 1956 world survey of inedible tallow and grease. This survey is being conducted through our commercial and agricultural attaches in 45 countries throughout the world. Countries included are those which produce, import and/or export significant quantities of tallow and grease. Estimates for "Soviet bloc" countries and China are included in the data.

Before discussing the preliminary results it probably would be advisable to tell how the survey originated and developed. It began with a relatively simple request from several businessmen through our New Orleans field office. These businessmen wanted to know how certain countries received their shipments of tallow and grease and the duties and regulations involved in importing into those countries.

After consideration by our own agency, we discussed the matter with representatives of the National Renderers Association and the American Meat Institute. They indicated considerable interest in the survey and requested that we obtain additional information on a world basis and covering a broader field. It was then discussed with officials of the Livestock and Meat Products Division, Foreign

Agricultural Service, U. S. Department of Agriculture. Through the cooperation of the two associations and the Foreign Agricultural Service, we were able to prepare an instruction to the various Foreign Service posts involved.

For the purposes of this market survey inedible tallow and grease were considered as one item. Therefore, details for each were not requested.

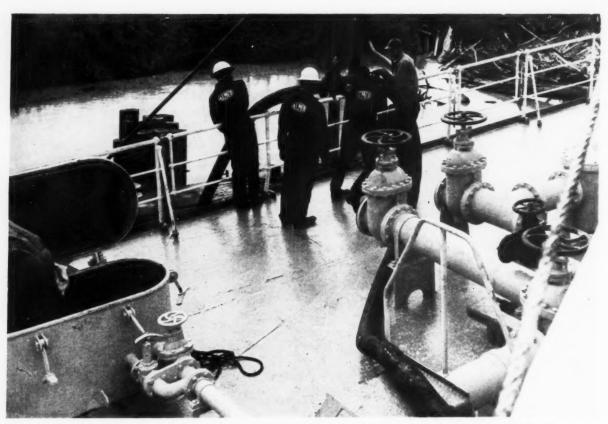
The following outline is a summary of the detailed requests contained in the instructions sent to each foreign service post included in the survey:

 Give number, kind, and location of plants rendering inedible tallow and grease. Indicate whether refining and

Tallow and grease for export can be loaded into two vessels simultaneously from storage tanks in background at twin-whart, Avandale Terminal, Avandale, La.

Photo courtesy American Tank Terminals

Paper presented during 31st annual convention, Association of American Soap & Glycerine Producers, New York, Jan. 23, 1958.



Line carrying tallow and grease from storage tanks is secured to loading vessel at Avendale Terminal, Avondale, La.

*Photo courtesy American Tank Terminals**

bleaching facilities were included at the plants.

- Production, export and import data were not requested since the information was already available in Washington. We did, however, request information on import and export trends. In addition, we asked for information on possible opportunities for increasing imports from United States.
- Provide information on whether imported inedible tallow and grease was received in bulk or in drums.
- Report statistics on consumption of inedible tallow and grease and the extent to which consumption was satisfied by domestic production.
- Indicate the principal types of consumers, plant locations, and quantities of inedible tallow and grease, consumed in soap (by types): in feed; in lubricants and greases, etc. Also, we requested information on use for human consumption.
- 6. Report consumption trends and provide an estimate of future consumption mentioning any special programs, private or public, which might indicate a trend.
- 7. Report duties and regulations.
- Give information on channels of distribution.
- Report the outlook indicating possibility of United States expanding its market.

The inedible tallow and

grease industry in the United States has been undergoing changes in the past 10 years and probably will continue for some time. Prior to the days of detergents, soap was by far the most important cleaning agent, and tallow, which was the principal ingredient used in the manufacture of soap, was in great demand by the soap industry. Gradually, however, detergents made greater and greater inroads on soap, until the point was reached in 1953 when for the first time, commercial production of synthetic detergents was greater than that of soap. This loss was a severe blow to the tallow industry and was aggravated by the fact that more and more tallow was being produced along with an increase in cattle slaughter. New markets for tallow were needed and producers looked to foreign markets and fortunately a demand was

Exports of tallow and grease have shown an upward trend since

World War II. In 1956 our exports accounted for 45 per cent of the disappearance of these fats, compared with 42 per cent in 1955 and 41 per cent in 1954. In 1935-39 the United States exported only two per cent of its production. Foreign use of United States tallow has increased mainly because of its high quality and low price. Furthermore, export supplies from other countries have been limited, and world demand has been strong because of economic recovery going on in many areas. Total exports of inedible tallow and grease in 1956 amounted to 1.5 billion pounds and preliminary figures for the first nine months indicate exports at 1.1 billion pounds in 1957.

Since foreign countries use tallow for about the same purposes as the United States does, the same problem that arose with substitution of detergents for soap in the U. S. may eventually take place in other countries. As a result, the

search for new uses for tallow is constantly going on. One of the most promising new applications is as a mixture in cattle feed. Uses of tallow and greases in animal feeds in 1956 as reported by the Bureau of the Census was 194 million pounds, up 72 million pounds from a year earlier.

Of the 1.5 billion pounds of inedible tallow and grease exported from the United States in 1956, approximately 60 per cent went to Europe, 20 per cent to Asia, nine per cent to North America, eight per cent to Africa and three per cent to South America. Principal markets in Europe are in Italy, Netherlands, Germany, Belgium and Luxembourg. Japan is by far our principal market in Asia accounting for 73 per cent of the 290 million pounds shipped to this area in 1956. Mexico, Cuba and Canada were our best markets in North America. The Union of South Africa and Egypt account for most of our exports to Africa and in South America, Colombia, Peru, and Ecuador were the principal markets.

It should be pointed out here that figures shown in the tables and those discussed are preliminary. Reports of certain countries have not been received and estimates have been prepared for these countries and are included in the figures. As stated previously, estimated figures for the "Iron Curtain" countries and China are included. A final detailed report will be made in the near future and the information will be made available to the Soap Association for distribution.

Consumption Totals

CONSUMPTION of inedible tallow and grease in the North American area amounted to approximately 1.9 billion pounds and represents 36 per cent of the world total use. In this area 92 per cent of consumption within the countries was satisfied by local production and the balance of eight per cent was supplied by imports. Exports from countries within this area amounted to 1.6 billion pounds, approximately 82 per cent of the world total exports.

The next largest consuming area was the European segment which used 1.4 billion pounds, representing 27 per cent of world consumption. Approximately 42 per cent of the consumption was satisfied by local production within these countries, whereas 53 per cent of the tallow and grease was imported. Only 68 million pounds were exported from this area.

In South America 596 million pounds were consumed. This represented 12 per cent of the world total. Local production supplied 88 per cent of their needs and the balance of 12 per cent was imported. Exports from South American countries in 1956 amounted to approximately 30 million pounds.

The Asiatic area which includes Japan and the Philippines, used 379 million pounds, an amount equal to almost eight percent of the world total. Production of tallow and grease in this area satisfied only a little over two percent of consumption and the balance of 98 per cent came from imports. No tallow and grease was exported from these countries.

Another seven per cent of world consumption, or 325 million pounds was consumed in the Africa-Oceania area. Approximately 58 per cent of their needs was satisfied by local production and 34 per cent was imported. Countries in this area, mainly Australia and New Zealand, exported 223 million pounds.

Under the category "Other," estimates have been included for the "Soviet Bloc" countries, China, and countries producing, importing or exporting insignificant quantities of inedible tallow and grease. Consumption in these countries was estimated to be at 561 million pounds, approximately 10 per cent of the world's total. There were only 20 million pounds exported from the countries included in this category.

The Livestock and Meat Products Division, FAS has provided us with a 1956 world production figure for inedible tallow and



Crewmen placing tallow line into deep tank of loading vessel at Avondale.

Photo courtesy American Liberty Tank Terminals

Table 1-World Inedible Tallow and Grease, Production and Trade in Specified Areas and Estimated World Total, 1956

Area (M	illions of Po Production		Imports
North America	3.243	1,591	115
Europe	661	106	921
Āsia	153		298
South America	751	30	42
Africa-Oceania	392	223	135
Other	581	20	_
World Totals	5,781	1,970	1,511

Source: Livestock and Meat Products Division, Foreign Agricultural Service, U.S. Department of Agriculture.

grease of 5.8 billion pounds, as shown in Table 1. Consumption is estimated at 5.2 billion pounds. It is likely that the difference between the two figures represents quantities moving into inventory position during the year. This quantity represents approximately 10 per cent of the world production figure.

Reports indicate that estimated consumption of inedible tallow and grease in 1957 was at about the same level as in 1956. Reports on European consumption show a modest decline from 1956. Information from all other major areas from which reports have been received indicate small increases. It should be mentioned at this point that the use of inedible tallow and grease in the future will depend upon the inroads that detergents may make in replacing soap in countries other than the U.S.

Because of the very limited information available in some

Table 3—Estimated World Consumption of Inedible Tallow and Grease, 1957

Ārea	Estimated Consumption
North America Europe South America Asia Africa-Oceania Other	1,908,500 1,352,500 599,445 411,653 328,100 561,000
Total Estimated World Consumption	5,161,198

Source: U.S. Department of Commerce, Food Industries Division Business and Defense Services Administration.

Table 2—World Inedible Tallow and Grease Consumption, Consumption from Domestic and Imported Materials and Exports, 19561

(Thousands of Pounds)						
Total Consumption			Exports			
1,871,121	1,724,907	146.214	1,590,700			
1,424,161	616.856		96,088			
595,977	521.855		30.000			
379,448						
324,599			223.000			
561,000	561,000	~				
5,156,306	3,697,976	1,458,328	1,939,788			
	Total Consumption 1,871,121 1,424,161 595,977 379,448 324,599 561,000	Total Consumption Consumption from Domestic Material 1,871,121 1,724,907 1,424,161 616,856 595,977 521,855 379,448 84,358 324,599 189,000 561,000 561,000	Total Consumption Consumption from Domestic Meterial Consumption from Imported Meterial 1,871,121 1,724,907 146,214 1,424,161 616,856 807,305 595,977 521,855 74,120 379,448 84,358 295,090 324,599 189,000 135,599 561,000 561,000			

¹ Preliminary. Source: U.S. Department of Commerce, Food Industries Division Business and Defense Services Administration.

countries statistics for some enduses of tallow and grease were estimated. The estimates were based on information available to us from sources other than the survey. The U.S. inedible tallow and grease end - use statistics as published by the Bureau of the Census are more detailed than for any other country in the world.

According to the estimates in Table 4, showing world end use of tallow and grease in 1956, 70 per cent was used directly in soap.

Approximately 68 per cent of the 3.6 billion pounds used in soap was used in laundry and industrial soaps and 32 per cent was used in toilet soaps. The use of inedible tallow and grease in feeds was approximately 237 million pounds and reports indicate 90 million pounds were used in lubricants and greases. The total figure for "Other" uses includes estimated data for fatsplitting, candles, human consumption, etc. You will note that there

(Turn to Page 109)

Table 4—Estimated World Consumption of Inedible Tallow and Grease, by Uses, 19561 — Part I

(Thousands of Pounds)					
Ārea	Total Consumption	Toilet Soap	Laundry Soaps		
North America	1,871,121	425,377	653,872		
Europe	1,424,161	317,635	670,991		
South America	595,977	123,918	436,313		
Asia	379,448	77,950	263,135		
Africa-Oceania	324,599	65,850	256,250		
Other	561,000	168,300	168,300		
World Totals	5,156,306	1,179,030	2,448,861		

1 Preliminary

Source: U.S. Department of Commerce, Food Industries Division Business and Defense Services Administration.

Table 4—Estimated World Consumption of Inedible Tallow and Grease by Uses, 19561 — Part II

Area	(Thousands of Feed	of Pounds) Lubricants and Greases	Other
North America	215,166	35,264	541,442
Europe	22,650	47,187	366,303
South America	-	_	35,740
Asia		8,535	29,828
Africa-Oceania	-	es contra	2,500
Other	-		224,400
World Totals	237,216	90,986	1,200,213

¹ Preliminary.

² Includes estimate of 651,210,000 pounds used in fat splitting.

Source: U.S. Department of Commerce, Food Industries Division Business and Defense Services Administration.

Carbon-14 method tests to determine

Effectiveness of Soaps and Detergents

•••••• By Florence Ehrenkranz and Emil H. Jebe

N 1956 a carbon-14 labeling method was reported for measuring the relative effectiveness of different home laundering conditions on soil removal (1,2). The laundering variables used in that experimental work were one soap and one synthetic detergent with wash waters at temperatures of 120°F., 140°F. and 160°F. Wash and rinse waters of 0 to 0.5 grains hardness and of 25-grains hardness were used. The material washed was cotton that had been soiled with a solution of carboxyl tagged tripalmitin in olive oil.

The experimental design for the work reported in 1956 was a split-plot design with a partially confounded 32 factorial applied to the split-plots (3). Washers formed the main plot treatments and the cotton swatches within washer loads were the sub-sampling units.

The same labeling method has now been applied in four sets of investigations in which the following laundering variables were studied: Investigation one - four synthetic detergents with wash and rinse waters of 25 grains hardness; investigation two - three synthetic detergents and one soap with wash and rinse waters of 0 to 0.5 grains hardness; investigation three - two soaps with softened (0 to 0.5 grain) wash and rinse waters versus two synthetic detergents with hard (25 grain) wash and rinse waters; investigation four - two synthetic detergents with hard wash and rinse waters versus the same synthetic

detergents with hard wash water and softened rinse water.

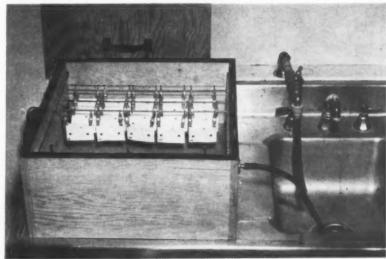
In investigation one, cotton swatches only were washed. In investigations two, three and four, cotton and "Dacron"* swatches that had been soiled with the tagged tripalmitin were washed.

Simpler experimental designs were practical with this set of investigations than had been practical for the work reported in 1956 because a full replication could be completed in the "day." For example, in investigation three it was possible in one day to prepare samples for the four wash conditions to be tested; "count" them, wash the samples and "count" again after washing in one day.

Swatch size for cotton and "Dacron" was the same as that used in the earlier work, namely 23/1 x 21/8 inches. The cotton Registered trade name, E. I. du Pont de Nemours & Co. swatches were cut from a new, muslin bedsheet that had been washed once, except for investigation one. In that investigation, half of the cotton swatches were cut from a new, unwashed sheet. The "Dacron" swatches were cut from "Dacron" yardgoods that had been washed once. The closely woven "Dacron" was of the type used for nurses' uniforms.

The swatches used for a day's washing were soiled with a solution of tagged tripalmitin in olive oil. The actual number of swatches soiled at one time varied for the different tests. In investigation one, four washes were done per day in each of two washers and four cotton swatches were used per wash; thus 32 swatches were soiled at one time. In investigation two, four washes were done per day in each of two washers and three cotton and three "Dacron" swatches were used per wash; thus

Figure 1. Arrangement for hanging labeled swatches for "aging" prior to washing and for drying after washing.



¹ Journal Paper No. J.3295 of the Iowa Agricultural and Home Economics Experiment Station, Ames, Iowa, Projects No. 1157 and 113.
² Department of Household Equipment, Iowa State College, Dr. Ehrenkranz is now at the School of Home Economics, Institute of Agriculture, University of Minnesota.
² Statistical laboratory, Iowa State College.

48 swatches were soiled at one time. In investigations three and four, four cotton and four "Dacron" swatches were used for each of four washes in one washer. Hence, 32 swatches were soiled at one time.

After the swatches were soiled, they were hung on rods by means of small metal clips and allowed to age five days in a box (Figure 1). The activities of the surfaces of the soiled swatches were counted the day before washing or the day of washing. After washing, the swatches were air-dried for one or two days and the activities counted again. The procedure was uniform within an investigation. For example, swatches were counted on the day of washing, or the day before washing, for all tests in that investigation.

As in the work reported earlier, initial and final counts for swatches and background counts were made with a Tracerlab TGC-2-GM end-window tube and the utility scaler provided with timer. The utility scaler was set to stop counting at 6400. In investigations one and two, only the times to reach initial and final counts of 6400 were recorded. In investigations three and four, the times to reach a count of 3200 were noted, as well as the times to reach a count of 6400.

Washing Conditions

WASH LOADS: The swatches were stapled to 20 x 32 inch fabric rectangles. These rectangles, together with enough additional

Investigation Two Means for the detergents D, D. \mathbf{D}_3 Da Overall Time differences (in minutes) Cotton swatches 1.66 1.28 2.28 1.70 14.52 'Dacron" swatches 965 9.46 Overall 8.09 5.37 10.94 7.50 5.61 Per cent soil removed 62 1 Cotton swatches 60.4 544 68.3 61.3 'Dacron' swatches 93.5 91.8 94.1 78.5 76.9 82.0 Overall

Analysis of Variance of Time Differences

Source of Variation	Degrees of Freedom	Mean Square
Detergents	3	162.31
Detergents by washers	3	12.08
Error for detergents	6	10.23
Swatches: cotton vs. "Dacron"	1	3236.29
Swatches by washers	1	17.95
Swatches by detergents	3	116.30
Swatches by washers by detergents	3	11.14
Error for swatches	8	7.29
Sampling error	64	16.34
Cotton only	(32)	0.11
"Dacron" only	(32)	32.58
Total	95*	

^{*}Replicates, washers and error for washers omitted, 3 degrees of freedom.

rectangles to make up a load of about 7.6 pounds, were used as a wash load. A separate set of fabric rectangles was used for each test condition in each of the four investigations. The soiled swatches were used only once.

Detergents: In all, eight detergents were used – six synthetics and two soaps. The syndets and soaps were of the "built" or "all purpose" type.

In the hard water, investigation one, detergents 1 and 4 were high-sudsing synthetic detergents; detergent 2 was a controlled-sudsing synthetic; and detergent 3 was a low-sudser. Detergents 2 and 4 were made by the same company. A detergent concentration of 0.38 per cent was used for all the tests in investigation one.

In the softened water, investigation two, detergents 1, 2 and 3 were the same as in investigation one. Detergent 5 was a soap. The detergent concentration for each test was 0.19 per cent.

In investigation three, detergents 5 and 6 were soaps and 5 was the same as that used in investigation two. Detergents 2 and 7 were controlled-sudsing synthetics made by different manufacturers and 2 was the same as that used in investigations one and two. A concentration of 0.026 per cent was used for the soaps and 0.11 per cent for the synthetic detergents.

In investigation four, which studied the effect of hard wash water with hard versus softened rinse waters, detergent 7 was the same controlled-sudsing synthetic detergent as that used in investigation three and detergent 8 was a high-sudser. Detergents 7 and 8 were made by the same manufacturer. A concentration of 0.10 per cent was used for both detergents.

Water: The hard water used in investigation one was well water with an average hardness of 24 to 25 grains calcium carbonate equivalent per gallon. The temperature

Investigation One

Means for the detergents	\mathbf{D}_1	\mathbb{D}_2	\mathbf{D}_3	D,	Overall
Time differences (in minutes) Per cent soil removed	3.22	2.75	2.48	2.70	2.78
	69.8	66.4	63.7	66.3	66.6

Analysis of Variance of Time Differences

Source of Variation	Degrees of Freedom	Mean Square
Washers	1	0.202
Error for washers	2	0.651
Detergents	3	2.336
Detergents x washers	3	0.367
Error for detergents	12	0.196
Sampling error	48	0.152
Total	95*	

^{*}Replications and the split-split treatments and interactions omitted, totaling 26 degrees of freedom.

Investigation Three

Means for the detergent-water	er combinations Hard Water		Softe	ened Water	,
	\mathbf{D}_2	D ₇	D_5	De	Overall
Time differences (in minutes) Per cent soil removed	7.60 59.5	4.62 56.3	1.64 44.8	3.60 57.6	4.37 54.5

Analysis of Variance of Time Differences

Source of Variation	Degrees of Freedom	Mean Square
Replications	2	22.87
Detergent-water combinations	3	148.62
Da vs De	(1)	46.24
D ₂ vs D ₇	(1)	106.59
$D_5 + D_6 \text{ vs } D_2 + D_7$	(1)	293.02
Error for D-W combinations	6	6.73
Cotton vs "Dacron" swatches	1	1100.40
Swatches by D-W combinations	3	157.86
Error for swatches	8	7.31
Sampling error	72	1.98
Cotton only	(36)	0.07
"Dacron" only	(36)	3.89
Total	95	0.00

of the wash water was 135°F.

The water used in investigation two was softened by a zeolite water softener. Average hardness was 0. to 0.5 grains per gallon. The temperature of the wash water was 135°F.

The hard water used in investigation three was the same as that in investigation one and the softened water the same as that in investigation two. The temperature of the wash water was 145°F.

The hard wash water used in investigation four was the same as that used in investigation one. The softened water was well water to which a non-precipitating type packaged water softener was added. The concentration of the water softener was 0.38 per cent. The temperature of the wash water was 145°F.

Washers: In all, four washers were used. For investigations one and two, the same two agitator-type automatic washers were used as had been used in the 1956 work. These two washers had given comparable results in the earlier work in which only cotton was washed.

For investigation three, a combination washer-dryer was used. Washing in this appliance is accomplished by a tumbling action. That is, the articles being washed are carried from the bottom to the top of a rotating cylinder; then they drop down through the washing solution; and the process repeats.

The small test swatches were removed from the large rectangles before the appliance started the drying part of the cycle.

For investigation four, an agitator-type automatic washer that had a dispensing wheel was used. For the tests with softened water rinse, the packaged water softener was added to the dispensing wheel at the start of the wash cycle. The softener remained in the wheel during the wash part of the cycle and dropped into the basket at the start of the rinse part of the cycle.

Except in the case of the combination appliance, the com-

plete cycle of the washers was used with a 10 minute wash time. As stated earlier, the swatches were removed before the beginning of the drying part of the complete cycle of the combination appliance.

Experimental Design Used

THE experimental designs used in these four investigations may be described as follows:

- Split-split plot experiment with washers as the main plot treatments, detergents as the first split treatments and sized versus unsized cotton swatches as the second split treatments.
- Split-split plot experiment again with washers as the main plot treatments, detergents as the first split treatments, but with cotton and "Dacron" swatches as the second split treatments.
- Split-plot experiment with soap/softened water and synthetic detergent/hard water combinations as the main plot treatments and cotton and "Dacron" swatches as the split-plot treatments.
- Split-plot experiment with factorial arrangement of detergents and rinse waters as the main plot treatments and again with cotton and "Dacron"

Investigation Four

Means for the factorial arrang	D:	D_8	Overal
Time differences (in minutes)			
Rinse water: Softened	1.13	1.27	1.20
Hard	0.92	0.81	0.87
Overall	1.02	1.04	1.03
Per cent soil removed	*100		
Rinse water: Softened	37.0	39.1	38.0
Hard	30.4	26.6	28.5
Overall	33.7	32.8	33.3

Analysis of Variance of Time Differences

Source of Variation	Degrees of Freedom	Mean Square
Replications	2	3.42
Detergent-rinse combinations	3	1.011
Dr vs Ds	(1)	0.003
Soft vs Hard	(1)	2.640
Interaction	(1)	0.390
Error for D-R combinations	6	0.314
Cotton vs "Dacron" swatches	1	3.534
Swatches by D-R combinations	3	0.246
Error for swatches	8	0.220
Sampling error	72	0.106
Cotton only	(36)	0.049
"Dacron" only	(36)	0.163
Total	95	

swatches as the split-plot treatments.

As already noted these simpler designs could be used for this series of investigations because the main plot treatments and first split treatments required only a number of wash loads for one replicate that could be washed in one day, i.e., under fairly uniform conditions. In the 1956 work the number of levels of the first split factors plus the main plot treatments required too many wash loads to complete a replicate in one day.

Experimental Results

As INDICATED in our 1956 study the numerical results may be analyzed in various ways. Again, principal emphasis is given to the analysis of the mean time difference for each "treatment" or "treatment combination"- that is, the time for counting 6400 counts after washing a swatch minus the time for counting 6400 counts before washing. These time differences, corrected for background count, have been averaged and subjected to the standard analysis of variance procedures. From the practical point of view, however, the variable per cent of soil removed is more understandable and easier to interpret. Additional comparisons of the analyses of the two variables, time difference and percent soil removed, have shown that similar interpretations are obtained from each.* Hence, means of both variables for the treatments or treatment combinations of interest in each experiment and the analysis of variance results for the time differences only are reported here.

Interpretation

FROM investigation one we conclude that there are real differences among the detergents used in that experiment. A detailed analysis of the means (4) indicates that D1 is clearly superior to its nearest competitor D2. While D3 appears

inferior to D2 and D4 the difference, D2-D3, is not quite significant at the five per cent level.*

Turning to investigation two we also find real differences among the detergents (actually three synthetics and one soap, D5) used in that experiment. Examination of the various individual means presented yields several comparisons of interest. In washing the cotton swatches, D1 and D2 are rather similar in cleaning ability as measured either by the time difference or per cent soil removed. D3 shows the lowest mean and D5 the highest mean for cotton. Similar placement of the detergents is indicated by the time difference means obtained from washing the "Dacron" swatches. But in studying the means one's attention is directed to the great difference in magnitude of the cotton and "Dacron" means, especially for the time difference, and also to the difference in dispersion of the means as readily observed by the range differences for cotton and "Dacron." These observations raise a question as to whether or not a fundamental assumption, homogeneity of variance, is fulfilled for the analysis of variance presented. A subdivision of the sampling error yields an answer to the question. Variation among "Dacron" swatches is clearly different and far greater than among cotton swatches when washed in the same washer loads. Thus, it seemed wise to conduct a separate analysis of the results for the cotton and "Dacron" swatches.**

The separate analyses permit a proper evaluation of the differences among the means already noted. Using the time differences as a measure of the effectiveness of the washing, the soap D5 is definitely superior to the three synthetic detergents both for "Dacron" and cotton. Among the synthetic detergents alone D1 has the highest

mean but the difference from D3 and D2 is significant only for "Dacron." Although D3 is lowest the difference, D2-D3, is of the order of reasonable sampling variation. Some comment appears in order for the measure - per cent soil removed. All of the detergents removed such a high percentage of the soil from "Dacron" that the observed differences may not be of practical importance. The cotton vs. "Dacron" difference itself, as already noted, is of course significant. Finally, the "Swatches by Detergents" interaction is large and significant. This interaction indicates the failure of the differences among the detergents to be the same for both materials even though the ranks of the means (time difference and per cent) were the same.

In investigation three provision was made for certain planned comparisons as shown by the single degrees of freedom set out for the detergent - water combinations in the analysis of variance. Overall observations are these: (1) "Dacron" was again washed much cleaner than cotton, (2) The synthetic detergents in hard water were superior to soaps in softened water, (3) and within the two groups, D6 was significantly better than D5, D2 significantly better than D7 with a larger difference between the latter two. Considering the washing ability on the two materials separately, for cotton: (1) Soaps in softened water were better than synthetic detergents in hard water, (2) D6 was better than D5 in softened water, and (3) D2 and D7 were about equal in hard water. For "Dacron" (1) The synthetic detergents in hard water were superior to the soaps in softened water; (2) D6 was better than D5 (as for cotton); (3) D2 was significantly better than D7. whereas for cotton D2 and D7 gave comparable results. The lack of uniformity of the differences between detergents for the two fabrics is again brought out by the

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^{*} Empirical comparisons of this type are interesting but not fully confirming. Theoretical study of appropriate analyses for the data from these experiments is continuing and will be separately reported.

^{*} Analysis based on the logarithms of the corrected time differences finds the difference D2-D3 just significant at the five per cent level.

** The separate complete analysis of variance tables are not presented for the sake of brevity, but the mean squares for error for detergents with six degrees of freedom were for cotton 0.2149 and for "Dacron" 17.60.

Table 1. Soap Production in Member Countries, 1956

In metric tons.

Country	Toilet Soap (78-80% Fatty Acid Content)	Shaving Soap (Sticks and Creams)	Household Soap (63% Fatty Acid Content)	Soap Powders (More Than 20% Fatty Acid Content)	Soft Socp with a Potash Base	Industrial Soap (Whatever the Fatty Acid Content)	Other Products Derived from Soap	Total
Austria	2,535	157	7,617	11,338	1,275	450	3,201	26,573
B.L.E.U.	8,521	274	8,864	21,366	32,976	3,125	15,139	90,265
Denmark	4,100	70	4,700	12,100	7,000	90	750	28,810
France	24,424	1,892	180,451	68,195	15,325	3,057	36,624	329,968
Germany	42,017	2,065	32,356	62,500	14,965	2,882	47,050	203,835
Ireland	1,331	30	4,301	3,805	-	_	762	10,229
Italy1	20,000	1,000	220,000	2,000	1,500	2,000		246,500
Netherlands	6,600	350	15,300	33,200	17,200	9,500	1,150	83,300
Norway	2,653	109	2,709	10,222	4,783	450	2,925	23,851
Portugal	949	102	50,4182	1	228	593	6,665	58,956
Sweden	5,800	160	2,450	9,800	8,650	n.a.	900	27,760
Switzerland	1,674	196	6,949	16,326	3,475	853	3,389	32,862
United Kingdom	73,000	n.a.	168,000	183,000	3	4	46,000	470,000
Total	193,604	6,405	704,115	433,853	107,377	23,000	164,555	1,632,909

Country estimate.
Of which 49,260 tons of "Offenbach" scap (50 per cent fatty acid content).

3. Included under "other products."

4. Included under other headings.

European Soap, Detergent Sales

EUROPEAN soap and detergent production and consumption have grown in 1956 by seven and nine per cent, respectively, (compared with five per cent and four per cent in 1955) according to a report published by the Chemical Products Committee of the Organization for European Economic Cooperation. Soap production rose four per cent in 1956 over 1955, the first production increase recorded since 1953, when it rose one per cent. However, at 1,634,000 tons it is still below the output in 1950 (1,818,000 tons) and in 1938 (1,884,000 tons). All types of soap have shared in this expansion ex-

cept industrial soap. Household soap, soap-based washing powders and soft soap have recovered ground lost in 1955. Toilet soap has shown a rising trend since 1954. Shaving and toilet soaps are the only soap products output of which exceeds the 1950 level. (Table 1).

Soap production in 1956 increased in Belgium (nine per cent); Denmark (10 per cent); France (eight per cent); Germany (eight per cent); Norway (five per cent); the Netherlands (12 per cent); and Switzerland (13 per cent). No change was reported in Italy and

Table 3. Trend of Production of Synthetic Detergents

(Surface-active finished products)

1953 = 100.

Country	1954	1955	1956
Austria	n.g.	142	167
Belgium	140	156	165
Denmark	107	114	123
France ¹	142	202	289
Germany	108	129	137
Italy	190 ²	306 ⁴	577°2
	106 ³	157 ³	213°3
Netherlands	1674	190 4	1404
	1015	1115	1125
	1006	996	1066
	1027	1397	n.a.7
Norway	112	239	286
Sweden	1388	1318	1508
Switzerland	118	136	141
United Kingdom	114	127	140
United States ¹	110	122	n.g.

1. Indices revised to take into account direct deliveries to industrial users, and especially the textile industry: 2. Household use; 3. Other uses; 4. Washing powder; 5. Scouring powder; 6. Liquid products—1954=100 (1953 figure not available); 7. Other products; 8. Liquid products; 9. Excluding liquid detergents and shampoos.

Table 2. Soap Production in O.E.E.C. Countries

Products	1955' Met	1956 ric Tons	Percentage Increase or Decrease
Toilet scap Shaving scap	189,743 6,385	193,604 6.405	+ 2
Household scap	684,006	704,115	+ 3
Scap powder	407,611	433,853	+ 6
Soft soap	101,600	107,377	+ 6
Industrial soap	32,485	23,000	29
Other products with soap basis	• 154,840	164,555	+ 6
Total	1,576,670	1,632,909	+ 4

1 Revised figures.

Table 4

	1954	1955	1956
Soaps	5.8	5.7	6.1
Synthetic detergents	2.6		3.4

the United Kingdom. Four countries showed a decline: Austria (down four per cent); Ireland (down eight per cent); Portugal (down five per cent); and Sweden (down four per cent).

European production of synthetic detergents showed a 14 per cent increase in 1956 compared with a 21 per cent increase in 1955. O.E.E.C. countries made 880,000 tons of synthetic detergents in 1956, compared with 770,000 tons in 1955. Production trends are shown in table 3.

Table 5. Estimated Consumption of Toilet Soap¹ and Soaps for Household Use² Per Head of Population

							11	KIIOS.
		Toile	Soap		Soc	ps for He	ousehold	Use
Country	1950	1954	1955	1956	1950	1954	1955	1956
Austria	0.2	0.3	0.4	0.4	4.6	3.7	3.5	3.4
Belgium	1	0.7	0.7	(0.8)	12	8.2	7.9	(8.5)
Denmark	0.7	0.9	0.9	(0.9)	8.4	5	5	(5.5)
France	0.4	0.5	0.5	0.5	5.9	5.8	5.3	6.2
Germany	n.a.	0.8	0.8	0.9	n.a.	3.5	2.8	3.1
Ireland	0.4	0.4	0.5	0.5	4.2	3.6	3.5	3.2
Italy	n.a.	0.3	0.4	0.4	n.a.	4.3	4.6	4.6
Netherlands	0.7	0.6	0.7	0.8	8	4.9	4.8	5.9
Norway	0.8	0.8	0.8	0.8	8	6.3	5.7	5.9
Portugal	n.a.	0.1	0.1	0.1	n.a.	6.2	6.8	6.4
Switzerland	n.a.	0.4	0.4	0.4	n.a.	5.3	5.4	6
United Kingdom	1.3	1	1.2	1.2	10.3	7	6.9	7
Average consumption	n.a.	0.6	0.7	0.7	Property.	5.2	5	5.4

1. Including shaving soap, 2. Household soap, washing powder, soft soap with a potash basis, "other soaps."

Production of glycerine, including synthetic, has increased considerably and is estimated at nearly 70,000 tons for 1956 (100 per cent glycerol content).

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Table 6. O.E.E.C. Countries' Imports and Exports of Soap

In metric tons.

		Imports					Exports		
O.E.E.C. Countries	Overseas Territories	Dollar Ārea	Other Countries	Total	O.E.E.C. Countries	Overseas Territories	Dollar Ārea	Other Countries	Total
378	-	3	4	385	22	_	104	31	157
1,127	_	83	4	1,214	2,169	228	34	6	2,437
157	-	16	1	174	53		9	1	63
206	60	3	1	270	177	32,925	47	723	33,872
155	_	6	47	208	1,557	516	195	223	2,491
402		4	-	406	13		1	19	33
122	15	-	17	154		149	-	230	379
2,154	2	19	657	2,832	613	1,703	65	2,136	4,517
85	-	2		87	160	exam.	_	1	161
18	1	1	-	19	829	1		_	829
n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
168		40	38	246	49			2	51
57	17	22	7	103	2,462	40,242	3,275	8,314	54,293
5.029	94	199	776	6.098	8.104	75.763	3.730	11.686	99,283
	200 378 1,127 157 206 155 402 122 2,154 85 18 n.a. 168 57	378	O.E.E.C. Countries Overseas Territories Dollar Area 378 — 3 1,127 — 83 157 — 16 206 60 3 155 — 6 402 — 4 122 15 — 2,154 2 19 85 — 2 18 1 1 n.a. n.a. n.a. 168 — 40 57 17 22	O.E.E.C. Countries Overseas Territories Dollar Area Other Countries 378 — 3 4 1,127 — 83 4 157 — 16 1 206 60 3 1 155 — 6 47 402 — 4 — 122 15 — 17 2,154 2 19 657 85 — 2 — 18 1 1 — n.a. n.a. n.a. n.a. 168 — 40 38 57 17 22 7	O.E.E.C. Countries Overseas Territories Dollar Area Other Countries Total 378 — 3 4 385 1,127 — 83 4 1,214 157 — 16 1 174 206 60 3 1 270 155 — 6 47 208 402 — 4 — 406 122 15 — 17 154 2,154 2 19 657 2,832 85 — 2 — 87 18 1 1 — 19 n.a. n.a. n.a. n.a. n.a. 168 — 40 38 246 57 17 22 7 103	O.E.E.C. Countries Overseas Territories Dollar Area Other Countries Total Countries 378 — 3 4 385 22 1,127 — 83 4 1,214 2,169 157 — 16 1 174 53 206 60 3 1 270 177 155 — 6 47 208 1,557 402 — 4 — 406 13 122 15 — 17 154 — 2,154 2 19 657 2,832 613 85 — 2 — 87 160 18 1 1 — 19 829 n.a. n.a. n.a. n.a. n.a. n.a. 168 — 40 38 246 49 57 17 22 7 103 2,462	O.E.E.C. Countries Overseas Territories Dollar Area Other Countries Total O.E.E.C. Countries Overseas Territories 378 — 3 4 385 22 — 1,127 — 83 4 1,214 2,169 228 157 — 16 1 174 53 — 206 60 3 1 270 177 32,925 155 — 6 47 208 1,557 516 402 — 4 — 406 13 — 149 2,154 2 19 657 2,832 613 1,703 85 — 2 — 87 160 — 18 1 1 — 19 829 1 n.c. n.c. n.c. n.c. n.c. n.c. n.c. 18 1 1 — 19 829 1	O.E.C. Countries Overseas Territories Dollar Area Other Countries Do.E.C. Countries Overseas Territories Dollar Area 378 — 3 4 385 22 — 104 1,127 — 83 4 1,214 2,169 228 34 157 — 16 1 174 53 — 9 206 60 3 1 270 177 32,925 47 155 — 6 47 208 1,557 516 195 402 — 4 — 406 13 — 1 122 15 — 17 154 — 149 — 2,154 2 19 657 2,832 613 1,703 65 85 — 2 — 87 160 — — 18 1 1 — 19 829 1 —<	O.E.C. Countries Overseas Territories Dollar Area Other Countries O.E.C. Countries Overseas Territories Dollar Area Other Countries 378 — 3 4 385 22 — 104 31 1,127 — 83 4 1,214 2,169 228 34 6 157 — 16 1 174 53 — 9 1 206 60 3 1 270 177 32,925 47 723 155 — 6 47 208 1,557 516 195 223 402 — 4 — 406 13 — 1 19 122 15 — 17 154 — 149 — 230 2,154 2 19 657 2,832 613 1,703 65 2,136 85 — 2 — 87 160 <t></t>

1. Included under "O.E.E.C. countries."

Table 7. O.E.E.C. Countries' Imports and Exports of Synthetic Detergents, 1956 (Surface-active finished products)

In metric tons.

			Imports					Exports		
Country	O.E.E.C. Countries	Overseas Territories	Dollar Ārea	Other Countries	Total	O.E.E.C. Countries	Overseas Territories	Dollar Ārea	Other Countries	Total
Austria	413		2	16	431	7	Personal Property Control of the	2	3	13
B.L.E.U.	10,267	_	85	30	10,382	5,124	143		352	5,619
Denmark	n.a.	n.a.	n.a.	n.a.	9,146	n.a.	n.a.	n.a.	n.a.	70
France	4341				434	1,1261	6,307	-		7,433
Germany	59	_	1	-	60	480	128	43	357	1,008
Ireland	1,919	_	6	_	1,925	n.a.	n.a.	n.a.	n.a.	n.a.
Italy	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Netherlands	3,678	-	2	_	3,680	629	175	1	130	935
Norway	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Portugal	n.a.	n.a.	n.a.	n.a.	n.a.				Married .	-
Sweden	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Switzerland	2,088		144	-	2,232	215	_		2	217
United Kingdom	n.a.	n.a.	n.a.	n.a.	n.a.	39,586	12,472	754	12,035	64,847
Total	18,858		240	46	28,290	47,167	19,225	800	12.879	80.141

1 Including trade with non-member countries.

Household Detergent Sales...

Part II

By Arthur C. Nielsen, Jr.*

President

A. C. Nielsen Co.

measuring special marketing programs in test cities and test areas have been greatly improved. As a result they can be of great aid in deciding which of two or three possible courses of action will lead to greatest sales and profits.

Also related to the subject of establishing long-range goals is the common error of: 9. Failure to differentiate between short-term tactics and long range strategy. There has been a tremendous increase in both the number and frequency of special promotions of various kinds in recent years. Some are aimed at the trade and others at the consumer. While these promotions have their place in achieving specific objectives it does not follow that they can be relied upon to achieve long-range goals as well.

Special promotions will move a lot of merchandise, particularly out of the factory. Sales can be stepped up to levels well above normal. Top management studying the financial reports can be easily confused and may conclude that this is the route to long-term profits as well. But some of these promotions borrow business from the future. In addition, unless the cost of the deal is allowed for in establishing the regular selling price for the brand, many of these deals will actually depress the profit earned on the brand when the slower rate of sales in the post-deal period has been taken into account.

Evidence in our files would indicate that deals cannot be expected to change the long-term



A. C. Nielsen, Jr.

trends of well known brands—and successive and frequent use of deals generally produces smaller and smaller sales results, even temporarily.

One might well ask, if such promotions do not contribute to the long-term growth of a brand, are they nevertheless necessary for other purposes. My answer is "yes." There are many legitimate uses which can be made of special promotions. In general they involve the achievement of tactical or short-term objectives. For example, they can be used to introduce a new or improved product if the product is definitely good.

Similarly, they can be used to promote a new use for a product or to broaden the distribution of a product, particularly one found in only a limited number of retail outlets in order that advertising may be more effective. In addition they may be advisable—or even essential—for established products as a defensive measure against an aggressive competitor.

Next on our list of common errors is: 10. Failure to admit defeat. None of us likes to see our creations classed as failures-whether it be a product idea, a sales technique or a brilliant piece of copy. However, those of us who work in this field can take some consolation from reminding ourselves occasionally that we are dealing with human behavior and that this is at best an inexact science. Many an idea which received a blue ribbon accolade from a committee of experts has nevertheless failed to ring the cash register.

But once we've been proven wrong by the vote of the consumer, we should face up to it, learn from our errors, and not be afraid to change.

Number 11: Failure to try new ideas while a brand is climbing. There is a good deal of hesitancy to change a winner while it is still progressing. For this reason many a good idea is passed up—yet a new package, a new design, or a change in product formula might easily accelerate the progress of the brand. All too often, changes are made only after a competitor forces the change.

It's important to keep an open mind about new ideas. Too many are prone to say "we thought of that ten years ago, and it wasn't any good then." New people with new ideas are often cold-shouldered by such negative thinking. Even when a brand is going up it is important to plan and create new advertising and sales approaches. Otherwise, self-satisfaction gets into your system, your competition suddenly gets new ideas and passes you.

^{*}Based on a talk given during the 31st annual convention, Association of American Soap & Glycerine Producers, New York, Jan. 23, 1958.

There's no time for complacency in selling.

Error number 12 is: Failure to integrate all phases of the marketing operation into the over-all program. No one phase of the marketing operation can be relied upon to carry the ball for the product. How often have you heard it said: "Let's up the advertising appropriation" or "let's change the advertising theme?" - and that's it. When such moves are contemplated, big dividends can often be earned by giving consideration at the same time to the many other phases of the marketing plan which will affect results-factors such as quality of the product, type of product, its packaging, distribution, etc.

It has been our experience that the most successful promotions involve more than one move-and more than one phase of the entire marketing program. "Coordination" is the key word.

Here is the trend of a brand which successfully reversed a downward share-of-market trend-a feat which has been termed the most difficult job in marketing. To reverse this downward trend, the promoters of this brand not only completely over-hauled their advertising program-including the theme, media and expenditures, but they

1. Made three different changes in

the product-one of which was unique to the field.

- 2. Added a new package size which market tests demonstrated was greatly desired by consumersand re-designed the label on the new and standard package.
- 3. Re-vamped their sales organization-and revised certain sales practices.
- 4. Adopted a market-by-market approach to the introduction of the brand.

And they appear at this time to be doing an excellent job of it!

Last on our list of common errors: 13. Failure to appraise objectively your competitors' brands -as well as your own. How many times have you heard someone say:

"They just can't continue advertising at that rate-they're losing their shirts!"

"Their brand may be selling more now-but we've got the best product. Ours will win out!" or "My wife says . . ."-and those three words are the most expensive words in marketing.

It's the easiest thing in the world to:

- a) Underestimate the resources and ingenuity of your competitors.
- b) While at the same time overestimating the position or the reputation of your own brand.

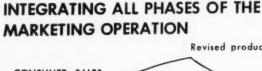
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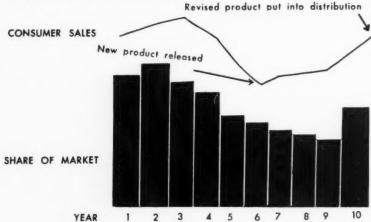
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Fourth revision of synthetic detergents

By John W. McCutcheon

Case History BRAND M





Trade Name	Manufacturer	Class and Formula	Main Uses	Form	% Conc.	Type	Remarks
Synthetics AR150	Hercules Powder Co.	Polyethylene glycol ester of rosin	Detergent	Liquid to wax	100%	Nonionic	Hydrophilic, emulsitier, low-foaming detergents
Synthetics AR200	Hercules Powder Co.	Polyethylene glycol ester of rosin	Detergent Emulsifier	Wax	%001	Nonionic	Hydrophilic, acid cleaners, oil well acidizing
Synthetics AR201	Hercules Powder Co.	Polyethylene glycol ester of rosin	Detergent Emulsifier	Liquid	% 58	Nonionic	Hydrophilic, acid cleaners, oil well acidizing
Synthogel	Synthron, Inc.	Sodium salt of a substituted amido-ethyl- sultonate, (Contains less than 1% soap)	Detergent	195	76%		An aqueous solution stable to acids, alkali and bleaching agents for use in textile scouring and wetting operations within the range 50°,100°C.
Synthrapol KB	Arnold, Hoffman & Co.	An ethylene oxide condensate	Detergent Wetting	Liquid	94.46	Nonionic	A tast wetting agent very stable to acid, alkali and satis; used in textile kier boiling and for general purpose cleaning
Synthrapol PWS	Arnold, Hoffman & Co.	Elhylene oxide condensate	Detergent	Liquid	100%	Nonionic	Detergent for cotton and wool; general purpose surfactant for paper industry
Tamol 731	Rohm & Haas Co.	Sodium salt of carboxylated polyelectrolyte	Dispersant	Liquid	25%	Anionic	Colorless dispersant for dyes and pigments. Also available as a 100% active powder
Tamol N	Rohm & Haas Co.	Sodium salt of condensed sulfonic acid	Dispersant	Powder	87.91%	Anionic	A dispersant for pigments, carbon black, clay, dyestulis, etc.
Tanapon X-70	Tanatex Corp.		Emulsifier	Liquid		Nonionic	An emulsifier for removing Varsol and other solvents from synthetic fibers, also a dyeing assistant
Tanaterge-60-L	Tanatex Corp.	Organic salt of an alkyl aryl sulfonate	Detergent Wetting	Liquid	%09	Anionic	A textile dye leveling, desizing and scouring agent
Tanaterge Special	Tanatex Corp.	A modified alkyl aryl sulfonate	Detergent	Liquid	26%	Anionic	A textile scouring and wetting agent
Tauranol DL DG MS MS RS WS	Finetex, Inc.	Scdium N-methyl-N-alkyl-taurate	Detergent	Paste	33% 16% 46% 46%	Anionic	Cover wide range of detergent applications where high form and good stability are required; alkyl groups as follows: "DL" and "DG"—tallon, "RS"—tallow acid, "MS"—oleic and "WS"—coconut oil acids
Teepol (British)	Shell Petroleum Ca., Ltd., through Shell Chemical Co.	Secondary sodium alkyl sulfate	Detergent Wetting	Liquid	34%	Anionic	From cracked petroleum oletines by sulfation; for general cleaning, also textiles, paints, rubber, etc.
Tegin	Goldschmidt Chemical Corp.	Glycerol monostearate	Emulsifier	Flake	100%	Anionic	Self-emulsifying; cosmetics, pharmaceuticals
Tegin 515	Goldschmidt Chemical Corp.	Glycerol monoslearate	Emulsifier	Flake	100%	Nonionic	Non-self emulsifying; uses: cosmetics, etc.
Tegin P	Goldschmidt Chemical Corp.	Dronvlane alvael monostearete	Emulsiner	Flake	100%	Nonionic	Acid emulsifying; uses: cosmetics, etc.
Telkanite M	Dexter Chemical Co.	A polyoxyaltylated fatty alcohol	Disperson	Licenson	0/001	Nonionia	A tartile due disperenti
Telkanol O	Dexter Chemical Co.	A polyoxyethylated fatty alcohol	Dispersant	Liquid		Nonionic	A textile dye leveling agent for cotton—wool and wool-synthetic unions
Tenesol	Charlotte Chemical Laboratories, Inc.		Wetting				Textiles
Tenlo 10	Griffin Division of Nopco Chemical Co.	Polyhydric alcohol ester	Wetting	Liquid	%001	Nonionic	Water-oil soluble
Tenlo 46A	Griffin Division of Nopco Chemical Co.	Polyhydric alcohol ester	Wetting	Liquid	30%	Anionic	Water soluble
Tenlo 70	Griffin Division of Nopco Chemical Co.	Polyhydric alcohol ester	Wetting	Liquid	100%	Anionic	Pigment mixing and grinding aid
Tenlo 400 420	Griffin Division of Nopco Chemical Co.	Polyhydric alcohol sulfonic acid derivative	Emulsifier	Liquid	100%	Anionic	For weed oils
Tenn-Acids 820 864 873	Tennessee Corp.	Alkyl aryl sulfonic acid	Detergent Base	Liquid		Anionic	Designed for compounders and others manufactur- ing cleaning compounds
Tensol	Synthetic Chemicals, Inc.	Sulfonated naphthalene alkyl ether	Emulsifier	Paste		Anionic	Textiles, leather, rubber

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Teox 120		Blockson Chemical Co., division Olin Mathieson Chemical Corp.	A polyethenoxy tallato	Detergent	Liquid	%001	Nonionic	This product is designed for use in non-sudsing detergent compositions
Tergavone	O	Ciba Co.	Alkyl aryl sodium sulfonate with the alkyl group kerosene derived	Detergent Wetting	Powder	40%	Anlonic	Textile scouring, wetting, wool carbonizing, etc.
Tergenol G	75	Hart Products Corp.	A modified alkyl sulfate	Detergent	Gel		Anionic	Textile scouring
Tergitol 08		Union Carbide Chemicals Co.	Sodium sulfate derivative of 2-ethyl 1-hexanol C,H,CH—CH,SO,Na	Wetting Emulsifier	Liquid	38%	Anionic	Very stable to high concentration of electrolyte; mercerizing penetrant
Tergitol 4		Union Carbide Chemicals Co.	C.H. Sodium sulfate derivative of 7-ethyl-2. methyl, 4-undecanol C.H.CHC.H.CHCH.S.M.	Wetting Penetrant Emulsifier	Liquid	25%	Anionic	Used for emulsion polymers where electrolyte is between 2 to 5%, or acid content between 1-10%; carbonizing wool
Tergitol 7		Union Carbide Chemicals Co.	C ₂ H. SO ₃ Na Sodium sulfate derivative of 3,9-diethyl tridecanol-6 C.H.CHC ₂ H.CHC ₂ H.CH(C ₂ H ₃) _k	Wetting Emulsifier	Liquid	25%	Anionic	Used where electrolyte is below 1%; textiles, emulsion polymers, rubber latices, leather, pharmaceutical
Tergitol EH	H	Union Carbide Chemicals Cc.	C ₂ H. SO ₃ Na Sodium 2-ehylhexene sulfonate CH ₈ CH ₂ —CH ₂ CH=C—CH ₂ SO ₃ Na	Wetting Penetrant	Liquid	25%	Anionic	Developed for concentrations of electrolytes higher than "Tergitol 08"; uses: electrolyte baths, mercerizing of cotton, metal cleaners, etc.
Tergitol P-28	-28	Union Carbide Chemicals Co.	Sodium di(2-ethylhexyl) phosphate (C,H ₀ CHCH ₂₎₋ NaPO,	Wetting Emulsifier	Liquid	25%	Anionic	Insoluble in acid, stable in alkali; uses: textiles kier boiling, dyeing, cleaners, etc.
Tergitol NPX, anhydrcus	rgitol NPK, anhydrcus NPX	Union Carbide Chemicals Co.	C_2H_δ Alkyl phenyl polyethylene glycol ether	Wetting Detergent Emulsifier Dispersant	Liquid	100%	Nonionic	Water-soluble detergent, wetting agent and emulsifier; textile scouring, household and industrial detergents, emulsion polymerization, emulsifier for agricultural concentrates; pigment dispersant, leather processing: "Tergital NPX" is the same as "Tergital NPX," anhydrous but 95%
Tergitol NP-14	NP-14	Union Carbide Chemicals Co.	Alkyl phenyl polyethylene glycol ether	Emulsifier Detergent	Liquid	100%	Nonionic	Oil-soluble emulsifier and detergent; dry cleaning detergents, industrial cleaners, etc.; agricultural toxicant formulations
Tergitol NP-27	NP-27	Union Carbide Chemicals Co.	Alkyl phenyl polyethylene glycol ether	Emulsifier Wetting Dispersant	Liquid	100%	Nonionic	Soluble in aromatic solvents; agricultural toxicant formulations; specialty cleaners and sanitizers
Tergitol	NP-35 NP-40	Union Carbide Chemicals Co.	Aikyl phenyl polyethylene glycol ether	Detergent Wetting	Liquid	100%	Nonionic	Highly water-soluble; detergent and wetting agent at elevated temperatures in presence of dissolved electrolytes; "NP-35" cloud point 95°C, approxi- mately; "NP-40" cloud point > 100°C.
Tergitol TMN	IMN	Union Carbide Chemicals Co.	Alkyl ether of polyethylene glycol	Wetting	Liquid	%06	Nonionic	Nonionic wetting and rewetting agent; leveling agent for emulsions and dispersions
Tergitol XD	QX	Union Carbide Chemicals Co.	Polyalkylene glyzol ether	Emulsifier Detergent	Semi-solid	%001 P	Nonionic	Emulsifier and low foaming detergent
Tergitol XH	ХН	Union Carbide Chemicals Co.	Polyalkylene glycol ether	Detergent	Paste	100%	Nonionic	Detergent and emulsifier for use at elevated tem- peratures
Terjolate (retail)	(retail)	White Laboratories, Inc.	Sodium octadecanoate N-diethanol, N-alkylamide et al	Detergent	Liquid		Anionic	A companion product of "Acidolate" and "Dermo- late"; nontritating to the skin; general purpose cleanser for household, etc.
Tetranol		Arkansas Co.	Sodium sulfate of a fatty acid ester	Wetting	Liquid	20%	Anionic	Uses: textile, penetrant and leveling agent in dye-

Trade Name	Manufacturer	Class and Formula	Man Oses	Form	% Conc.	Iype	WORKELES.
Tetrine— acid disodium trisodium tetrasodium	Glyco Products Co.	Ethylenediamine tetraacelic acid	Sequestrant	Powder	%66	Anionic	Sequesters and chelates polyvalent metallic ions
Tetronics	Wyandotte Chemicals Corp.	A series of compounds formed by the addition of propylene oxide to ethylene-diamine, followed by the addition of ethylene oxide	Detengent Dispersant	Liquid Paste Solid	100%	Nonionic	Used as materials for detergent compounds, dye leveling agents, dispersing agents, etc.
Tetrosan 60%	Onyx Oil & Chemical Co.	Alkyl dimethyl 3:4-dichlorobenzyl ammonium chloride. Also contains alkenyl dimethyl ethyl	Germicide	Liquid	%09	Cationic	Santitzing agent
Tetrosan 3, 4D	Onyx Oil & Chemical Co.	Alkyl dimethyl 3, 4 dichlorobenzyl ammonium chloride	Germicide	Liquid	%09	Cationic	Veterinary and pharmaceutical applications; acid and alkali-stable
Texapon Extract A	Fallek Products Co.	Lauryl alcohol ammonium sulfate	Detergent	Liquid	33-35%	Anionic	Shampoo base
Texapon Extract O	Fallek Products Co.	Fatty alcohol sulfate	Detergent	Liquid	28-30%	Anionic	Liquid shampoos
Texapon Extract Special	Fallek Products Co.	Lauryl alcohol ammonium sulfate	Detergent	Liquid	46-48%	Anionic	Liquid shampoos, and bubble bath
Texapon Extract T	Fallek Products Co.	Lauryl alcohol triethanolamine sulfate	Detergent	Liquid	50-55%	Anionic	Liquid shampoos, and bubble bath
Texapon CS Texapon L-100 GL-Emulsion	Fallek Products Co. Fallek Products Co.	Sodium lauryl sulfate Sodium lauryl sulfate	Detergent	Paste Powder Liquid	%09 %08 30%	Anionic	Cream shampoos A detergent for shampoos and toothpaste
Texapon K 12	Fallek Products Co.	Pure lauryl sodium sulfate	Detengent Wetting Dispersant	Powder	+%06	Anionic	Cosmetic preparations, tooth paste
Texapon P	Fallek Products Co.	Fatty alcohol sodium sulfate	Detergent	Liquid	28%	Anionic	For detergents, cleansing and rinsing agents, wetting agents
Texapon T Paste	Fallek Products Co.	Fatty alcohol triethanolamine sulfate	Detergent	Paste	80-82%	Anionic	Shampoos
Texapon Z	Fallek Products Co.	Fatty alcohol sodium sulfate	Detergent Wetting Dispersant	Powder	58-62%	Anionic	Powder shampoos, bubble bath, toothpaste, insecticides, paint
Texapon Z High Conc. Powder	Fallek Products Co.	Fatty alcohol sodium sulfate	Wetting	Powder	十%48	Anionic	Shampoos, toothpaste
Texapon Z High Conc. Needles	Fallek Products Co.	Fatty alcohol sodium sulfate	Wetting	Needles	+%88	Anionic	Shampoos, toothpaste, pharmaceutical preparations
The "Texapon"	"Texapon" series was formerly marketed under the	under the "Dehydag" trade name.					
Texol	Burkart-Schier Chemical Co.	Diethanolamine fatty acid condensate	Detergent Wetting	Liquid	100%	Nonionic	General purpose surfactant
Texsoft	Armour & Co.	Qualernary ammonium compound	Emulsifier	Paste	75%	Cationic	Quaternary for textile lubrication, and softening
Textraioam	Tex-Chemical Co.	An alkyl amide condensate	Detergent	Liquid		Nonionic	Useful in textile scouring where the emulsification of oils and greases is important
Textrapen	Tex-Chemical Co.	Sulfated alkyl ester	Wetting	Liquid		Anionic	A wetting out agent for textiles prior to dyeing
Textrapon	Tex-Chemical Co.	Sodium oleyl-N-methyl tauride	Detergent	Gel		Anionic	A high foaming textile detergent
Textraterge	Tex-Chemical Co.	A sulfated fatty amide condensate	Detergent	Liquid		Anionic	A textile scouring agent for cottons, rayons and synthetics
TH-525 (retail)	Theobald Industries	Compounded product	Detergent	Bead		Anionic	A retail laundry product containing hydanioln

Irade Name	Manuacturer	Class and rormula	Man Uses	Form	% Cone.	Iype	Kemarks
T-H Emulsifier C-1 D-1 M-1 M-1 W-1 P SW-1	Thompson-Hayward Chemical Co.	A blend of anionic and nonionic products	Emulsifier	Liquid		Anionic	Designed for use with agricultural insecticides and herbicides
Tide (retail)	Procter & Gamble Co.		Detergent	Granular		Anionic	Built all-purpose detergent
Titadine TA	Titan Chemical Products, Inc.	Mixture of alkyl naphthalene sulfonic acid ester and sulfated alcohol	Wetting				Textiles, leather, paper, household detergents, etc.
Titamine TCP	Titan Chemical Products, Inc.	Derivative of sulfonated alcohol	Wetting				Textiles, leather, paper, household detergents, etc.
Titan Decitrene	Titan Chemical Products, Inc.	Alkylated aromatic sulfonate	Wetting				Textiles, leather, paper, household, detergents
Titanole RMA	Titan Chemical Products, Inc.	Alkylated aryl sodium sulfonate	Wetting				Textiles, leather, paper, household, detergents
Toluene Sodium Sulfonate	Various	ממחות מוני לייני מייני מ	Solubilizer	Powder	85-95%	Anionic	Useful as a solubilizing agent for liquid detergents, as a conditioner in synthetic powders, etc. Available from several manufacturers in various degrees of active strength
Toximul 102 103	Ninol Labs., division of Stepan Chemical Co.	Sulfonate nonionic blend	Emulsifier	Liquid			"Toximuls 102" and "103" are used together to emulsify herbicides and chlorinated insecticides
Toximul 500	Ninol Labs., division of Stepan Chemical Co.	Sulfonate nonionic blend	Emulsifier	Liquid			
Toximul MP	Ninol Labs., division of Stepan Chemical Co.	Sulfonate nonionic blend	Emulsifier	Liquid			Special emulsifier for Malathion phosphate in- secticide
Trem 014 024 615 616 618	Griffin, division of Nopco Chemical Co.	Polyhydric alcohol esters	Emulsifier	Liquid	100%	Nonionic	For agricultural emulsifiable insecticide concentrates
Trenamine DA W.25	Alco Oil & Chemical Co.	Sodium salt of condensed alkyl aryl sulfonate	Dispersant		16, 25%	Anionic	"W-25" — sodium salt of polymeric acid, dispersants for solids in water
Trenamine T W D	Alco Oil & Chemical Co.	Inorganic and organic salts of fatty acids	Emulsifier	Paste	15-25%	Anionic	Emulsifiers for latex; "Trenamine D" is a nonionic synthetic
Trenamine W-30	Alco Oil & Chemical Co.	Alkyl aryl sodium sulfonate	Wetting	Powder	30%	Anionic	A wetting and penetrating agent for textile, paper and rubber emulsion
Trend (retail) Trend Liquid (retail)	Purex Corp.	An alkyl aryl sulfonate, plus builders	Detergent	Powder		Anionic	A light duty type household cleaner; "Trend Liquid" is a foam stabilized anionic for light duty such as dishes
Trend 5	Purex Corp.	Built dodecylbenzene scdium sulfonates containing phosphates and a foam stabilizer	Detergent	Solid		Anionic	Spray dried built aikyl aryl sulfonates for commercial dishwashing use
Trend 40 Neutral Beads	Purex Corp.	Dodecylbenzene sodium sulfanate plus sodium sulfate sodium chloride	Detergent	Solid	40%	Anionic	"Trend 40," spray dried product made from "Purex Detergent Slurry," is available to manufacturers for blending into other products
Trepenel A-60 A-60 A-60 A-60 A-60 A-60 A-60 T-100 E-0-A-cid	Treplow Products, Inc. Treplow Products, Inc.	Di-2-ethyl hexyl sodium sulfosuccinate Nonyl phenol polyglycol ether sultate Ammonium salt of above Ammonium and sodium salt Sodium salt Thethanolamine salt Sulfonic acid	Wetting	Paste Liquid	60 60% 40% 100%	Anionic	Dishwashing and heavy duty laundry detergents: "S.40" is designed for industrial cleaning, such as textile scouring. "Trepanol EO.Acid" is a base for formulating dishwashing products

Trade Name	Manufacturer	Class and Formula	Main Uses	Form	% Conc.	Type	Remarks
Trepenol S-30-T	Treplow Products, Inc.	Salts of tridecand polyglycol ether sulfate	Detergent	Liquid 30	30, 100%	Anionic	"S30.7" is the sodium salt; "T-100.7" the triethanol. A
Trepenol	Treplow Products, Inc.	Salts of lauryl sulfate as given below	Detergent			Anionic	tn.
-WA		Sodium salt	runismer	Paste	30%		Used in shampoos; as an emulsifier for resin
-WAT		Triethanolamine salt	Detergent	Paste	45%		
.AM		Ammonium salt	Detergent	Liquid	30%		For use in acid pH shampoos
·EP		Diethanolamine salt	Detergent	Liquid	40%		Very low cloud point; shampoos
· MG		Magnesium salt	Detergent Emulsifier	Solid	30%		der for
Trepolate Acid H	Treplow Products, Inc.	Dodecylbenzene sulfania acid	Detergent Base	Liquid	94%	Anionic	Products differ in free inorganic acid and % active; product "H" contains 5-6%, product "P" 0.2%; used as a base material by compounders
Trepolate M-10	Treplow Products, Inc.	The triethanclamine salt of dodecylben- zene sulfonate plus foam stabilizer	Detergent	Liquid	%09	Anionic	An all-purpose detergent for dishwashing laundries, car washing, shampoos, etc.
Trepolate L40 F40 F40 F85 F85 F95 T-60 T-60 YLA	Treplow Products, Inc.	Saits of dodecylbenzene sulfanate Sedium salt Sodium salt Sodium salt Sodium salt Sodium salt Sodium salt Amine salt	Detergent	Slurry Flake Fowder Flake Powder Flake Liquid	40% 40% 40% 85% 85% 60% 65%	Anionic	A general series of detergent products for special uses; "Trepolate T-60," a liquid free of inorganic stalls, is very water soluble. "Trepolate YLA" is designed for kerosene, emulsion degreasers and charge systems
Trepoline 505	Treplow Products, Inc.	Diethanolamine condensates of various fatty acids	Thickener	Liquid	100%	Nonionic	Low foam power; thickener, is water dispersible and a good scleent for textiles and cosmetics
Trepoline CN-61	Treplow Products, Inc.	Diethanolamide of coconut fatty acids	Emulsifier Detergent	Liquid	100%	Nonionic	Useful in floor cleaning compositions
Trepoline ST	Treplow Products, Inc.	Monoisopropanciamine condensate of lauric and myristic acids	Foamer Stabilizer	Flake	100%	Nonionic	A foam stabilizer for anionic detergents, etc.
Trepoline LM-123	Treplow Products, Inc.	Monoisopropanolamine condensate of lauric acid	Foamer Stabilizer	Flake	100%	Nonionic	
Trepoline L LM-46	Treplow Products, Inc.	Diethanolamine condensate of Jauric acid	Foamer Stabilizer	Liquid	100%	Nonionic	"Trepoline LM46" and "Trepoline M3" are similar to "Trepoline L" and "Trepoline S4," respectively,
Trepoline S-4 M-3	Treplow Products, Inc.	Diethanolamine condensate of coconut fatty acids	Foamer Stabilizer	Liquid	100%	Nonionic	except that they contain a minimum of 90% fatty amide
Trimulso	Aquaness, distributed by Baroid Division of National Lead Co.	Oxyethylated tall oil ester	Emulsifier	Liquid	%07	Nonionic	Used in drilling mud
Triton B-1956	Rohm & Haas Cc.	Modified phthalic glycerol alkyd resin	Emulsifier	Liquid	77%	Nonionic	Used as a spreader in insecticide and fungicide sprays for fruits and vegetables and an emulsifier in insecticide formulations
Triton CF-10	Rohm & Haas Co.	Alkyl aryl ether	Detergent Wetting	Liquid	100%	Nonionic	Low foaming detergent for mechanical dishwash- ing, automatic laundering, metal cleaning, dairy equipment cleaning
Triton CF-21	Rohm & Haas Co.	Alkyl aryl polyether	Detergent	Liquid	100%	Nonionic	Low feaming detergent for mechanical dishwash- ing, automatic laundering, metal cleaning, dairy equipment cleaning
Triton GR-5	Rohm & Haas Co.	Sulfonated alkyl esters	Wetting	Liquid	%09	Anionic	High speed wetting and rewelling, absorbency improvement of textiles
Triton GR-7	Rohm & Haas Co.	Sulfonated alkyl esters	Emulsifier Detergent	Liquid	64%	Anionic	Dry cleaning detergent, agricultural emulsions

Trade Name	Manufacturer	Class and Formula	Mozin Uses	Form	% Conc.	Type	Remarks
Triton NP-56	Rohm & Haas Co.	Nonyl phenyl polyethoxy ethanol	Wetting Detergent Dispersant Emulsifier	Liquid	100%	Nonionic	Household and industrial cleaners, textile processing, emulsifying agent for pesticides
Triton W-30 Conc.	Rohm & Haas Co.	Sodium salt of alkyl aryl polyether sulfate plus isopropanol	Wetting	Liquid	27%	Anionic	Leveling and wetting agent for textile processing
Triton X-45	Rohm & Haas Co.	Isooctyl phenyl polyethoxy ethanol	Detergent Dispersant Wetting	Liquid	100%	Nonionic	Insecticide emulsifier; dry cleaning detergent, dispersing and wetting agent in organic systems
Triton X-67	Rohm & Haas Co.	Alkyl polyether alcohol	Wetting	Wax-like solid	100%	Nonionic	Dye leveling, emulsifying, acid degreasing
Triton X-100	Rohm & Haas Co.	Isooctyl phenyl polyethoxy ethanol	Wetting Detergent Dispersant Emulsifier	Liquid	100%	Nonionic	Household and industrial cleaners; textile processing, wool scouring, emulsifying agent, for insecticides and herbicides, etc.
Triton X-102	Rohm & Haas Co.	Isocatyl phenyl polyethoxy ethanol	Defergent Wetting	Liquid	100%	Nonionic	Metal cleaning, industrial and household liquid detergents and cleaners
Triton X-114	Rohm & Haas Co.	Isooctyl phenyl polyethoxy ethanol	Detergent Wetting	Liquid	100%	Nonionic	Controlled foam detergent
Triton X-120	Rohm & Haas Co.	Alkyl aryl polyether alcohol	Wetting Dispersant	Powder	40%	Nonionic	Wetting and dispersing agent in agricultural wet- table powders
Triton X-123	Rohm & Haas Co.	Alkyl benzyl polyethylene glycol ether	Detergent Wetting	Liquid	100%	Nonionic	Caustic stable detergent for bottle washing, metal cleaning and industrial applications
Triton X-138	Rohm & Haas Co.	Modified alkyl aryl polyether alcohol	Detergent Wetting	Liquid	%66	Anionic	Wool scouring, degreasing of leather hides prior to tanning
Triton X-151	Rohm & Haas Co.	Blend of alkyl aryl polyether alcohols with organic sulfonates	Emulsifier	Liquid		Anionic	Used alone or in combination with "Triton X-171" in a wide range of emulsifiable concentrates for insecticide applications
Triton X-155	Rohm & Haas Co.	Alkyl aryl polyether alcohol	Wetting Detergent Emulsifier	Liquid	100%	Nonionic	Emulsifying agent for insecticides, herbicides, and spray oils
Triton X-161 X-171	Rohm & Haas Co.	Blend of alkyl aryl polyether alcohols with organic sulfonates	Emulsifier	Liquid		Anionic	Used alone or in combination with "Triton X-151" in a wide range of emulsifiable concentrates for insecticide applications
Triton X-200	Rohm & Haas Co.	Sodium salt of alkyl aryl polyether sulfonate	Detergent Wetting Emulsifier	Liquid	28%	Anionic	Metal cleaning, pickling and plating baths: house- hold cleaning formulae
Triton X-301	Rohm & Haas Co.	Sodium salt of alkyl aryl polyether sulfate	Detergent Wetting Penetrant	Paste	20%	Anionic	Household and industrial cleaners, high foam detergent
Triton X-400	Rohm & Haas Co.	Stearyl dimethyl benzyl ammonium chloride and related cationics	Emulsifier	Paste	25%	Cationic	Cosmetic grade cationic softener used in cream hair rinses and other cosmetic applications
Triton 770 Cor.c.	Rohm & Haas Co.	Sodium salt of alkyl aryl polyether sulfate	Detergent Wetting Penetrant	Liquid	30%	Anionic	Detergents, waxes, cleaners, rag cooking, general wetting agent and textile processing; degreasing agent on skins prior to tanning
Triumph	Armour & Co.	A built polyoxyethylene ester of fatty acids	Detergent Wetting	Powder		Nonionic	Built low sudsing detergent for laundry use, textile scouring, etc.
TSA-30	Pilot California Co.	80% para, 20% ortho toluene sulfonic acid	Detergent Base	Liquid	100%	Anionic	A base for preparing solubilizers and detergent conditioners
Tween 20	Atlas Powder Co.	Poiyoxyethylene sorbitan monolaurate	Emulsifier Solubilizer	Liquid	100%	Nonionic	General emulsifier used to solubilize essential oils and vitamins
Tween 21	Atlas Pawder Co.	Polyoxyethylene sorbitan monolaurate	Emulsifier	Liquid	100%	Nonionic	Good wetting agent; shorter polyoxyethylene chain than "Tween 20"
Tween 40	Atlas Powder Co.	Polyoxyethylene sorbitan monopalmitate	Emulsifier	Liquid	100%	Nonionic	General emulsifier

Trade Name	Manufacturer	Class and Formula	Main Uses	Form	% Conc.	Type	Remorks
Tween 60	Allas Powder Co.	Polyoxyethylene sorbitan monostearate	Fmulsifier	Tiente	100%	Nonionia	in a contract of the contract
Tween 61	Atlas Powder Co.	sorbitan	Emulsifier	Solid	100%	Nonionic	chain
Turney RE							Tween 60"
Tween 90	Alids Fowder Co.	Polyoxyethylene sorbitan tristearate	Emulsifier	Solid	100%	Nonionic	General emulsitier; large application in foods
ween so	Allas Powder Co.	Polyoxyethylene sorbitan manooleate	Emulsifier Solubilizer	Liquid	%001	Nonionic	General emulsifier: used to solubilize essential oils
Tween 81	Atlas Powder Co.	Polyoxyethylene sorbitan monooleate	Emulsifier	Liquid	%001	Nonionic	tier; shorter polyoxyethylene chain 80"
Tween 85	Allas Powder Co.	Polyoxyethylene sorbitan triolegie	Emulsifier	Liquid	100%	Nonionic	emilisifie
Twitchell 7231 Oil	Emery Industries, Inc.	Sufonated mineral oil	Rewetting	Liquid	%001	Anionic	Combined rewetting agent, softener and textile fiber
Twitchell 7240 Oil 7250 Oil		Sulfonated fatty acid derivative	Emulsifier	Liquid	100%	Anionic	Combined rewetting agent, softener and textile fiber lubricant
Twitchell 8262 Base 8266 Base	Emery Industries, Inc.	Sulfonated mineral oil	Emulsifier	Liquid	100%	Anionic	designed to emulsify mineral oils into
Udet 125	Universal Detergents, Inc.	Sodium alkyl aryl sulfonate	Detergent	Liquid	20%	Anionic	
	Universal Detergents, Inc.	Scdium alkyl aryl sulfonate	Wetting Detergent Wetting	Liquid	\$08 and 90%	Anionic	High molecular weight product; has low foam and high hard surface detergency. Available as a 90.95% solid and a 50% solution
Ultrapole 5	Ultra Chemical Works, Inc.	Fatty acid amine condensate	Detergent Emulsifier	Liquid	97-100%	Nonionic	Water soluble in all proportions: thickening and toam stabilizer, base for liquid detergents, compatible with soap
Extra Conc.	Ultra Chemical Works, Inc.	Fatty acid amide condensate	Defergent	Liquid	%001-86	Nonionic	"Ultrapole G" is a modified "Ultrapole S" which will tolerate substantial quantities of alkali when made up into stock solutions; primarly used in textile processing
Ultrapole DL	Ultra Chemical Works, Inc.	diethanolamine a	Emulsifier	Liquid	100%	Nonionic	Dry cleaning compounds
Ultrapole 90-15 90-25	Ultra Chemical Works, Inc.	Laucyl diethanolamide with a high fatty amide content	Detergent	Wax Wax Liquid	100%	Nonionic	"Ultrapole 90-15" is a foam stabilizer and base for liquid detergents. "90-05" has a higher amide content than "90-15." is similar to "Ultrapole 80-25" is similar to "Ultrapole 8" with higher degree of purity and amide content.
Ultravon JF	Ciba Co.	Polyether alcohol	Detergent Emulsifier Dispersant	Liquid	33%	Nonionic	Detergent for the scouring of wool and other fibers; Dyeing assistant for wool
Ultrawet DS	Atlantic Refining Co.	Alkyl benzene sodium sulfonate	Detergent	Flake	85%	Anionic	Medium molecular weight; better solubility than "Ultrawet K" series
Ultrawet K	Atlantic Refining Co.	Alkyl benzene sodium sulfonate	Detergent	Flake	85%	Anionic	High molecular weight; high foam and detergency
Ultrawet SK	Atlantic Refining Co.	Alkyl benzene sodium sulfonate	Detergent	Bead	35%	Anionic	"Ultrawet K" base plus sodium sulfate
Ultrawet 30 DS	Allantic Refining Co.	Aikyl benzene sodium sulfonate	Detergent	Liquid	25.5%	Anionic	Liquid form or "Ultrawet DS"
Ultrawet 35 KX	Atlantic Refining Co.	benzene	Detergent Wetting	Liquid	31.5%	Anionic	Liquid slurry; form of "Utlrawet"
Ultrawet 60L	Atlantic Refining Co.		Detergent Wetting	Liquid	%09	Anionic	A shampoo and household detergent base material; very low in inorganic salts
Unipnat A20, A30 A35, A40 A45, A40 A50, A60 A65, A76 A86	Chemical Division, General	Methyl esters of latty acids	Intermediate	Liquid and Solid	100%	Nonionic	"Uniphats" are methyl esters of caprylic, capric, lauric, myristic, palmitic, stearic, oleic acids, and mixed coconut acids. Uses: intermediates for detergents, foam builders and stabilizers, emulsitiers, textile specialties

Trade Name	Manufacturer	Class and Formula	Main Uses	Form	% Conc.	Type	Remarks
Unishade L P NS	Kali Míg. Co.	Blend of nonionic ethylene oxide condensates and alkyl aryl sodium sulfonate	Detergent Wetting	Paste	45%	Anionic	Products directed to the textile industry as dye leveling and scouring agents, "Unishade L" is designed for synthetic fiber scouring, "P" for piece goods and "NS" for one bath scouring of hosiery
Unisol 2L, 4L 4DL, 40 4S, MO, 4T	Universal Chemicals Corp.	Polyglycol esters of fatty acids	Emulsifier Wetting	Liquid and Solid	100%	Nonionic	Uses: Cosmetics, waterless hand cleaners, rewelting agent for textile finishes, anti corrosive agents, in animal feeds, etc.
Unitex	Commonwealth Color and Chemical Co.	Sodium salt of alkylate aromatic sulfonate	Detergent		27%		
UNR 50%	Onyx Oil & Chemical Co.	Alkyl dimethyl benzyl ammonium chloride	Germicide	Liquid	20%	Cationic	Industrial type sanitizer
Vaisol	American Cyanamid Co.	Same as corresponding Aerosols	Wetting Dispersant		100%	Anionic	This name applies to Aerosols when sold through the insecticide department of American Cyanamid Co. Otherwise identical: "Vatsol OT" is same as "Aerosol OT" and "Vatsol OS" is another name for "Aerosol OS"
Vel (retail)	Colgate-Palmolive Co.	An alkyl aryl sodium sulfonate	Detergent	Powder	31%	Anionic	Household, dishes, fine fabrics, woolens, rugs, etc.
Vel Liquid	Colgate-Palmolive Co.		Detergent	Liquid		Anionic	A light duty liquid detergent for dishwashing and general household cleaning
Velva Soft	Armour & Co.	Qualernary ammonium compound	Softener Anti-static agent	Liquid		Cationic	Softening, fluffing, and antistatic agent for laundries and textile lubricant
Vericrest	Protean Chemical Corp.	Sodium salt of a hydrolized protein	Penetrant	Liquid	48%	Anionic	Used in the cosmette industry as an additive to shampoos and in cold wave neutralizers
Veripon	Protean Chemical Corp.	A hydrolized protein condensation product with a fatty acid derivative	Detergent Wetting	Liquid	42%	Anionic	A high foaming detergent, stable in hard water and alkali, but not stable in acid; textiles and other industrial applications
Veripon-Cosmetic	Protean Chemical Corp.	A hydrolized protein condensation product with coconut oil fatty acids	Detergent Wetting	Liquid	44%	Anionic	A shampoo and cosmetic base material
Veriset	Veriset Corp.		Dispersant	Liquid			A water soluble liquid added to the extent of 2.4 ounces per bag of Portland cement to increase bonding and compressive strength
Versene - 67 - 100	Dow Chemical Co.	Tetrasodium salt of ethylenediamine tetragoetic acid	Sequestrant Chelating agent	Powder Bead Flake		Anionic	An ethylenediamine tetracarboxylic acid salt forming a chelate ring with a large number of metallic ions including calcium and magnesium
Versene Acid	Dow Chemical Co.	Ethylenediamine tetraacetic acid	Sequestrant Chelating agent	Powder	100%	Anionic	Ethylenediamine tetracarboxylic acid which forms saits with amines or ammonia. Such saits are weakly basic and chelate metal ions. Slightly soluble in water. Can be readily solubilized with addition of alkaline components
Versene Fe-3	Dow Chemical Co.	Blend of EDTA Na, and N.N. di(2-hydroxyethy!) glycine, sodium salt	Sequestrant Chelating agent	Liquid Powder Bead Flake		Anionic	Chelates polyvatent metal ions, including iron in mildly alkaline solutions
Versene Fe-3	Dow Chemical Co.	N,N,di-(2-hydroxyethyl) glycine, mono sodium salt	Sequestrant	Liquid		Anionic	Inactivates iron ion specifically in alkaline media
Versenol -120	Dow Chemical Co.	Trisodium salt of N-hydroxy-ethyl ethyl- enediamine tetraacetic acid	Sequestrant	Liquid Powder Beads		Anionic	Inactivates polyvalent metal ions including iron in pH range of 7 to 10.5 $$
Versotex N	Reilly-Whiteman-Walton Co.	Alkyl aryl sodium sulfonate	Wetting	Liquid	40%	Anionic	A general purpose industrial cleaner
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Trade Name	Manufacturer	Class and Formula	Main Uses	Form 9	% Conc.	Type	Remarks
Victamine C	Victor Chemical Works	Substituted amide of aikyl phosphate	Emulsifier	Liquid	100%	Carlomic	Textile softening agent; also available in pre- dispersed form at lower concentration
		RNH P ONH,R					
	1	-					
	R == C ₁₀ H ₅₅	APPS O R' = water solubilizing group	Q.				
Victamine D	Victor Chemical Works	Same as "Victamine C" except R = Ci.Har	Emulsifier	Solid	100%	Cationic	Textile softening agent; oil additive for antirust properties; avoilable in predispersed form
Victomul 20 24C 27 89 •	Victor Chemical Works	Organic phosphate esters	Emulsitier	Liquid and Solid	%001	Nontonie	A series of compounds varying in water and organic solvent solubility; use: petroleum industry
Victawel 12	Victor Chemical Works $R^t = water \ solubliking \ group \label{eq:Relation}$	R—O P=0 D D R—O R= medium alkyl group	Wetting Penetrant Dispersant	Liquid	100%	Nenionic	Package dyeing of nylon, acid type cleaners, starch coatings; non-doaming; "Victavet 14" is similar to "12" with a molecular weight of about 500
Victawet 35B 35BPI	Victor Chemical Works	(ccty)), Na ₃ (P _N O _m) ₂ octy] = 2 — ethyl hexyl	Wetting Penetrant	Paste	20%	Anionic	Textiles, particularly vat dyeing: non-foaming; "Victawei 35BPl" is a blend of anionic and non-tonic products; pilot plant scale
Victawet 58B	Victor Chemical Works	Phospherated higher alcohol (Capryl): NasPsOm/s	Wetting Dispersant Penetrant	Paste	%02	Anionic	Penetrant, providing moderate foam
Visco 710 730	Visco Products Co.	Nonionic resin	Emulsitier	Liquid	%001	Nontonie	General purpose
Vultamol	Advance Solvents & Chemical Corp.		Dispersant	Powder			A dispersant for use in the rubber industry, in latex paints
Warco A-266	Warwick Chemical Co., div., Sun Chemical Corp.	Sodium laurayl sarcoside	Detergent	Liquid	35%	Anionic	Purified material; approved by F.D.A. for dentifrice use
Warco A-266T	Warwick Chemical Co., div., Sun Chemical Corp.	Sodium lauroyl sarcoside	Detergent Foamer	Liquid	35%	Anionic	Especially useful to high foaming detergents such as shampoos and aerosol shaving foams; has corrosion inhibiting properties
Warco A-298 A 298 Conc.	Warwick Chemical Co., div., Sun Chemical Corp.	Low melocular weight quaternary	Anti-static	Liquid	18%	Cationic	Effective anti-static agent for various types of surfaces
Warco Amine #4A	A Warwick Chemical Co., div., Sun Chemical Corp.	Fatty imidazoline		Liquid	3001	Cationic	Corresion inhibitor for ferrous metals
Warco Amines 2, 3	3 Warwick Chemical Co., div., Sun Chemical Corp.	Higher fatty imidazolines	Detergent	Paste	100%		Use: acid cleaners, anti-static agents
Warcolene 350	Warwick Chemical Co., div., Sun Chemical Corp.	Glyceryl menostearate	Dispersant Softener	Paste	25%	Nonionic	Textile softener resistant to scorching and oxidation
Warcolene W	Warwick Chemical Co., div., Sun Chemical Corp.	Sulfated fatty acid ester	Wetting Rewetting Softener	Liquid	%02	Anionic	Resistant to oxidation and discoloration; assists in sanfortzing
Warcosol NM-9	Warwick Chemical Co., div., Sun Chemical Corp.	Alkyl polyethylene glycol ether	Wetting Penetrant Dispersant	Liquid	%06	Nonionic	Resistant to acids, alkalis, and other electrolytes; very pronounced wetting and rewetting effects
Warkeelate S-42 S-43 PS-47	Warwick Chemical Cc., div., Sun Chemical Corp.	Tetra sodium ethylene diamine tetra scetate	Sequestrant	Liquid	27% 41% 100%	Anionic	Sequesters all polyvalent metals over wide pH range; softens water, clarifies and stabilizes liquid scaps, beer, and other materials which are readily confaminated by trace elements
Warkeelate Acid	Warwick Chemical Cc., div., Sun Chemical Corp.	Ethylene diamine tetra acetic acid	Dispersant Stabilizer	Powder	100%	Anionic	Useful for preparation of amine or ammonia salts of EDTA as well as other applications where the free EDTA acid is required

Irade Name							
WashSoff	G. H. Conant Co.	Polyoxyethylene modified cationic	Detergent Thickener	G G	%99	Cationic	A sudsing cationic for cleaning, softening, deodorizing and reducing bacterial count of hospital linens
Wetanol	Glyco Products Co.	Modified sodium salt of sulfated fatty alcohol	Penetrant Wetting	Solid	45%	Anionic	General purpose for creams, leather, paper, etc.
Wetsit Conc. W-1086M	Jacques Wolf & Co.	Sodium salt of a dodecyl toluene	Wetting	Liquid	65%	Anionic	Textiles, paper, "Wetsit W-1086M" is a concentrated salt free form for use as a car or window cleaner
Wetsyn	E. F. Drew & Co.	A secondary amide of lauric acid	Detergent Wetting	Liquid	30%	Nonionic	Good lathering; viscosity is maintained on dilution
Wettex 40X	Essential Chemicals Co.	Special alkyl aryl wetting agent	Dusting Wetting Non-caking	Powder	40%	Anionic	Extra fine powdered wetting agent for dusting compounds in agricultural and insecticide fields
Wettex 40CMC	Essential Chemicals Co.	Special alkyl aryl wetting agent with CMC	Wetting	Powder	43%	Anionic	Special use wetting agent for laundry compounds and powdered cleaners
Wettex 85	Essential Chemicals Co.	Phosphated alkyl aryl sulfonate	Wetting	Powder	82%	Anionic	A phosphated powdered base for high active wet- ting agent powdered cleaners; cloud free; also used in liquids
Wettex 40	Essential Chemicals Co.	Sodium alkyl aryl sulfonate	Wetting Detergent	Liquid	40%	Anionic	Base wetting agent for powdered cleaners and laundry detergents; available in various particle sizes
Wetting Agent S							See Oronite Wetting Agent S
Wicasan PB	Wica Chemicals, Inc.	Sultated ester	Wetting	Liquid	35%	Anionic	Toxilles, wetting and leveling
Wicdlex K	Wicd Unemicals, Inc.	raily acid condensate	Detergent	Fidnia	30.70	Amonic	ayeing, bleaching and
Wicatex 1000	Wica Chemicals, Inc.	Modified highly sulfated vegetable cil	Wetting	Liquid	20%	Anionic	Textiles, dyeing, bleaching and scouring assistant
Wicatex MA-5 Conc.	Wicatex MA-5 Conc. Wica Chemicals, Inc.	Biend of ethylene oxide adduct and alkyl aryl sulfonate	Wetting Penetrant Detergent	Liquid	40%	Nonionic	Textiles, dyeing, bleaching and scouring assistant
Wicatex 3062	Wica Chemicals, Inc.	Blend of selected emulsifiers and solvents	Wetting	Liquid	100%	Anionic	Textiles, dyeing and scouring assistant — Dacron carrier
Wicawet TC RO	Wica Chemicals, Inc.	Alkyl aryl sodium sulfonate	Wetting	Liquid	30%	Anionic	Textiles, package dyeing and wet processing: "Wicawet R0" — textiles, particularly jig dyeing
Wilmar 798, 790, 780, 770, 710, 708, 714, 709, 714, 713, 712.	Wilson Martin	Fatty acids	Detergent Intermediates	Solids	100%	Anionic	"Wilmar," Acids shown are lauric and coconut acids. They are also available from other animal and vegetable oils. Detergents, cosmetics, soaps
Wisk (retail)	Lever Bros. Co.		Detergent	Liquid			Built all-purpose detergent
Witco DGL	Witco Chemical Co.	Diethylene glycol laurate	Emulsifier	Liquid	100%	Nonionic	Emulsion paints, lubricant, general emulsifier
Witco DGO	Witco Chemical Cc.	Diethylene glycol oleate	Emulsifier	Liquid	%001	Nonionic	General emulsifier
Wixyn Double	Wica Chemicals, Inc.	C1:HwCONCH,C2:H,SO3Na	Wetting	Liquid	42%	Anionic	Textiles, all-purpose detergent
Wixyn NC	Wica Chemicals, Inc.	Fatty alkanolamide	Wetting	Liquid	%06	Nonionic	Textiles, naphthol dyeing assistant
Wixyn 100	Wica Chemicals, Inc.	Fatty alkanolamide	Detergent Dispersant	Liquid	100%	Nonionic	Textiles, dyeing, bleaching and scouring assistant
Wixyn AO	Wica Chemicals, Inc.	Fatty acid ester	Wetting	Liquid	40%	Anionic	Tratiles; dyeing, bleaching and scouring assistant
Wixyn SA-4	Wica Chemicals, Inc.	CI:HalCONCHaC:H,SOaNa	Wetting	Liquid	42%	Anionic	Textiles; all-purpose detergent

Wye Industries Wye Industries Fries Bros., Inc. Dixo Company, Inc. fondte, Nedse Chemical Co. Salt Ultra Chemical Works and others ion RO Onyx Oil & Chemical Co.	Class and Formula	Main Uses		Form % Conc.	Type	Remereles
Wye Industries Fries Bros., Inc. Dixo Company, Inc. Dixo Chemical Co. Salt Ultra Chemical Works and others on RO Onyx Oil & Chemical Co.	Modified nonyl phenoxy polyoxyethylene ethanol	Detergent	Liquid	100%	Nonionic	General cleaner, water soluble
Fries Bros., Inc. Dixo Company, Inc. onate, Nease Chemical Co. Salt Ultra Chemical Works and others on RO Onyx Oil & Chemical Co.	lkyl aryl sulphonate	Detergent	Liquid	45%	Anionic	Water soluble determent
Dixo Company, Inc. Nease Chemical Co. Salt Ultra Chemical Works and others on RO Onyx Oil & Chemical Co. Onyx Oil & Chemical Co.	Glycerol monostearate	Emulsifier	Powder		Anionic	Scap defection and percentage makes this product self-emulsifying
onate, Nesse Chemical Co. Sali Ultra Chemical Works and others on RO Onyx Oil & Chemical Co.	A formulated detergent	Detergent	Liquid		Anionic	Used mainly as a detengent and wetting agent in the development industrial
on RO Onyx Oil & Chemical Co.	s named	Hydrotrope	Solid	95%	Anionic	Also available in a 40% active solution
Onyx Oil & Chemical Co.						Warmer of the Control
91 .	11	-	-	The second second		Name crianged to Chamine RO
	Sulfondied Idily deld condensate	Detergent	Flake	100%	Anionic	Textile processing, household detergent, burnishing compound formulations; also available in paste compound.
Zelec NE E. I. du Pont de Nemours & Fatty alcoh UN Co.	atity alcohol phosphate compositions	Anti-static	Paste	100%	Cationic	Antistatic for processing textiles and plastics
Zephiran Winthrop Laboratories Alkyl dime	ikyl dimethyl benzyl ammonium chloride Germicide	Germicide	Liquid	13%	Cationic	A refined product in aqueous solution (12,8%) and
Zest (retail) Procter & Gamble Co.					Anionic	A bar form synthetic detergent

Firms Whose Products Are Listed

Aceto Chemical Co., 40-40 Lawrence St., Flushing 54, N. Y. Adell Chemical Co., 51 Garfield St., Holyoke, Mass. Advance Solvents & Chemical Division of Carlisle Chemical Works. Inc., 500 Jersey Ave., New Brunswick, N. J. Air Reduction Chemical Co., 150 E. 42nd St., New York 17, N. Y. (A division of Air Reduction Co.) Alco Oil & Chemical Corp., Trenton Ave. & William St., Philadelphia 34, Pa. Alframine Corp., 72.76 Putnam St., Paterson 4, N. J.
Allied Chemical & Dye Corp. (See National Aniline Division of.)
All-Tex Specialties Co., 65 Meadow St., Warwick, R. I.
Alox Corp., Buffalo Ave. & Iroquois St., Niagarc, Falls, N. Y.
Amalgamated Chemical Corp., Rorer & Ontario Sts., Philadephia 34. Pa. American Alcolac Corp., 3440 Fairfield Rd., Baltimore 26, Md. American Aniline & Extract Co., Inc., Vencago & F Sts., Philadelphia, Pa. American Cholesterol Products, Inc., Amerchol Park, Edison, N. J. American Colloid Co., Merchandise Mart Plaza, Chicago 54, Ill. American Cyanamid Co., 30 Rockefeller Plaza, New York 20, N. Y. American Resinous Chemicals Corp., 103 Foster St., Peabody, Mass. Amoco Chemicals Corp., 910 South Michigan Ave., Chicago 80, Ill. Aniara Chemicals, a scles division of General Aniline & Film Corp., 435 Hudson St., New York 14, N. Y. Apex Chemical Co., 200 South First St., Elizabethport 1, N. J. Aquaness Corp., 2005 Quitman St., Houston 26, Tex. (A division of Atlas Powder Co.) Arkansas Co., 185 Foundry St., Newark 1, N. J. Armour & Co., 1355 West 31st St., Chicago 9, Ill.

Arnold, Holfman & Co., 55 Canal St., Providence 1, R. I. (A subsidiary of Imperial Chemical Industries, Ltd.) Atlantic Relining Co., 260 S. Broad St., Philadelphia 1, Pa. Atlas Powder Co., Wilmington 99, Del. Atlas Relinery, Inc., 142 Lockwood St., Newark 5, N. J. Baroid Division, National Lead Co., P.O. Box 1675, Houston 1, Tex. Beach Soap Co., 125 Lawrence St., Lawrence, Mcss. Beacon Chemical Industries, Inc., 33-51 Richdale Ave., Cambridge 40. Mass. Berkeley Chemical Corp., Summit Ave., Berkeley Heights, N. J. (See also Millmaster Chemical Corp.)

Berkshire Color and Chemical Corp., Springfield 5, Mass. Blockson Chemical Co., Joliet, Ill. (A division of Olin Mathieson Chemical Corp.) Borden Co., Chemical Div. (See American Resinous Chemicals

Corp. Branchflower, Lyle, Co., 15th Ave., N.W. at Shilshole, Seattle 7.

Wash. Britex Corp., 17-18 Lewis Wharf, Boston 10, Mass.

Bryton Chemical Corp., 6 North St., Quincy 71, Mass.
Bryton Chemical Co., P.O. Box 418. Marcus Hook, Pa.
Burkext-Schier Chemical Co., 1228 Chestnut St., Chattanooga 2.

Carbide & Carbon Chemicals Co., (See Union Carbide Chemicais Co.)

Carlisle Chemical Works, Inc., West St., Reading 15, O. Carlstadt Chemical Co., 430 13th St., Carlstadt, N. J.
*Chaffardon, J., 209 Market St., Lynn, Mass.

Charlotte Chemical Laboratories, Inc., 1122 S. Blvd., Charlotte, N. C. Chloral Chemical Corp., 171 Lombardy St., Brooklyn 22, N. Y. Ciba Co., 627 Greenwich St., New York 14, N. Y.

Cincinnati Chemical Works, Inc., 1055 Laidlaw Ave., Cincinnati 37. O.

Cleary, W. A. Corp., P.O. Box 749, New Brunswick, N. J. (See Natione, Inc., sales agent for W. A. Cleary Corp.)
Colgate-Palmclive Co., 300 Park Ave., New York 22, N. Y.
Colloids Inc., 394 Frelinghuysen Ave., Newark 12, N. J.

Commercial Solvents Corp., 260 Madison Ave., New York 16, N. Y. Commonwealth Color and Chemical Co., 3240 Grace Ave., New

Conant. G. H., Co., 2076 Mass Ave., North Cambridge 40, Mass.
Concord Chemical Co., 205 South Second St., Camden 1, N. J.
(See Standard Soap Co.)
Continental Chemical Co., 195 Twenty First Ave., Paterson, N. J.
Continental Oil Co., 1270 Avenue of the Americas, New York 20,

Cowles Chemical Co., 7016 Euclid Ave., Cleveland 3, O. Crown Chemical Corp., 240 India St., Providence 3, R. I. Crown Zellerbach Corp., Comas, Wash.

Producers of acid and oil-layer petroleum sulfonates or animal and vegetable oil sulfonates.

*Deecy Products Co., 120 Potter St., Cambridge 42, Mass. De Paul Chemical Co., 120 Potter St., Cambridge 42, Mass.

De Paul Chemical Co., 44-27 Purvis St., Long Island City, 1, N. Y.

Dewey & Almy Chemical Co., 62 Whittemore Ave., Cambridge 40,

Mass. (A division of W. R. Grace & Co.)

Dexter Chemical Corp., 819 Edgewater Road, New York 59, N. Y.

Diamond Alkali Co., 300 Union Commerce Bldg., Cleveland 14, O. Distillation Products Industries, 343 State St., Rochester 3, N. Y. (Division of Eastman Kodak Co.) Diversey Corp., 1820 Roscoe St., Chicago 13, Ill. Dixo Co., 158 Central Ave., Rochelle Park, N. J. Dolge, C. B., Co., Westport, Conn. Dominion Products Co., 10-40 44th Dr., Long Island City 1, N. Y. Dow Chemical Co., Midland, Mich.
Drew, E. F., & Co., 15 E. 26th St., New York 10, N. Y.
DuBois Co., 1120 W. Front St., Cincinnati 3, O. du Pont de Nemours, E. I. & Co., Wilmington 98, Del. Eastman Kodak Co., Rochester, N. Y. (See Distillation Products Inc.) Economics Laboratory, Inc., 914 Guerdian Bldg., St. Paul, Minn. Emery Industries, Inc., 4300 Carew Tower, Cincinnati 2, O. Emil Greiner Co., (See Manostat Corp.) Emkay Chemical Co., 319 Second St., Elizabeth, N. J. Emulsol Chemical Corp.. 75 East Wacker Drive, Chicago 1, Ill. (A division of Witco Chemical Co.) Essential Chemicals Co., 5906 No. Port Washington Rd., Milwaukee, Wis. Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y. Esso Standard Oil Co., 15 W. 51st St., New York 19, N. Y.
Fallek Products Co., 165 Broadway, New York 6, N. Y. (Agents for Deutsche Hydrierwerke G.m.b.H., Duesseldorf, Germany.)
*Farrington, W. U., Estate of, P.O. Box 389, East Greenwich, R. I.
Faas, Chazles T., Inc., 233 Broadway, New York 7, N. Y.
Fels & Co., 73rd St. & Woodland Avenue, Philadelphia 42, Pa.
Fiber Chemical Corp., P.O. Box 218, Matawan, N. J.
Fine Laboratories, Inc., Pay 541 Francest III. Fine Laboratories, Inc., Box 541, Freeport, III.
Fine Organics, Inc., 211 E. 19th St., New York 3, N. Y.
Finetex, Inc., 418 Falmouth Avenue, East Paterson, N. J. Fred'k. A. Stresen-Reuter, Inc. (See Stresen-Reuter, Fred'k.) Fries Bros., Inc., Box 8, Carlstadt, N. J. Gallowhur Chemical Corp., N. Water St., Ossining, N. Y. Geigy Chemicals Division of Geigy Chemical Corp., Saw Mill River Road, Ardsley, N. Y. (P.O. Box 430 Yonkers, N. Y.) General Aniline & Film Corp. (See Antara Chemicals.)
General Dyestuff Corp. (See General Aniline & Film Corp.) General Mills, Inc., chemical division, South Kensington Road, Kankakee, Ill. Girdler Co., 224 E. Broadway, Louisville 1, Ky. (Division of National Cylinder Gas Co.) Glidden Co., chemurgy division, 1825 N. Laramie Ave., Chicago Globe Compound Co., Waterbury-Bristol Rd., Waterbury 12. Conn. Glyco Products Co., 350 Fifth Ave., New York 1, N. Y. Goldschmidt Chemical Corp., 153 Waverly Place, New York 14. N. Y. Goodrich Chemical Co., B. F., 3135 Euclid Ave., Cleveland 15, O. Grace, W. R. and Co., 3 Hanover Sq., New York 4, N. Y. (See Grace, W. R. and Co., 3 Hanover Sq., New York 4, N. Y. (See Dewey & Almy Chemical Co.)

Greeff, R. W., & Co., 10 Rockefeller Plaza, New York 20, N. Y. (Exclusive sales agent for Fries Brothers, Inc.)

"Greenwood Textile Supply Co., 27 Meadow St., Warwick, R. I. Griffin Division, Nopco Chemical Co., 1141 South 14th St., Richmond, Calif. Hall, C. P. of Illinois, 5145 W. 67th St., Chicago 38, 111. Hart Products Corp., 1440 Broadway, New York 18, N. Y. Hercules Powder Co., Wilmington 99, Del. Heveatex Corp., 78 Goodyear Ave., Melrose 76, Mass. Hooker Electrochemical Co., 2600-47th St., Niagara Falls, N. Y. Houghton, E. F., & Co., 303 W. Lehigh Ave., Philadelphia 33, Pa. Hydrocarbon Chemicals, Inc., 130 Lister Ave., Newark 5, N. J. Imperial Chemical Industries (N. Y.), Ltd., 488 Mcdiscn Ave., New York 22, N. Y. (See Arnold, Hoffman & Co.)
*Industrial Products, Inc., 215 S. Laurens St., Greenville, S. C.
Intex Chemical Corp., 167 Main St., Lodi, N. J. Jacques Wolf & Co. (See Wolf, Jacques & Co.) Jefferson Chemical Co., P.O. Box 303, Houston 1, Tex. Kali Míg. Co., 427 E. Moyer St., Philadelphia 25, Pa. Kalide Corp., 19 S. Canal St., Lawrence, Mass. Kamen Scap Products Co., 230 Broadway, New York 7, N. Y. Kehew-Bradley Co., 40 Oliver St., Boston 10, Mass. Kelite Co.p., Berkeley Heights, N. J. Kem Products Co. (out of business) Kessler Chemical Co., State Rd. and Cottman Ave., Philadelphia King, O. L., & Co., 436 Clementina St., San Francisco 3, Calif. Klem Chemicals, Inc., 14401 Lanson Ave., Dearborn 2, Mich. Knapp Products Inc., Lodi, N. J. Kraft Chemical Co., 917 W. 18th St., Chicago 8, Ill.

Krystall Chemical Co., 2108 N. Southport Ave., Chicago 14, Ill.

Lake States Yeast Corp., Rhinelander, Wis. Laurel Scap Mig. Co., Tioga, Thompson & Almond Sts., Philadel-

*Leatex Chemical Co., 2722 N. Hancock St., Philadelphia 33, Pa. Lemke, B. L., and Co., 199 Main St., Lodi, N. J.

Lever Brothers Co., 390 Park Ave., New York 22, N. Y. Leyda Oil and Chemical Co., 12603 Cerise Ave., Hawthorne, Calif. Lignosol Chemicals, Ltd., P.O. Box 2025, Quebec, P. Q., Canada. Lyle Branchflower Co. (See Branchflower, Lyle, Co.) Maguire Industries, Inc., 182-27 Liberty Ave., Jamaica 33, N. Y. Maher Color & Chemical Co., 1700 North Elston Ave., Chicago 22. Manostat Corp., 22 N. Moore St., New York 13, N. Y. Marathon Corp., Rothschild, Wis.

*Marden-Wild Corp., 500 Columbic. St., Somerville 43, Mass.

*Marlowe-Van Loan Corp., 1511 Byrum St., High Point. N. C. Mathe Chemical Co., 169 Millbank St., Lodi, N. J. Maywood Chemical Works, 100 W. Hunter Ave., Maywood, N. J. Merrell, Wm. S., Co., Galbraith Rd. & Penna. R. R., Cincinnati 15. O. Metro-Atlantic, Inc., Centredale 11, R. I. Michel, M. and Co., 90 Broad St., New York 4, N. Y. Millmaster Chemical Corp., 295 Madison Ave., New York 17, N. Y. (Exclusive sales agent for Berkeley Chemical Corp.)
*Mineral Oil Refining Co., P.O. Box 625, Dickinson, Tex. Miramol Chemical Campany, Inc., 277 Coit St., Irvington 11, N. J. Mona Industries, Inc., 65 E. 23rd St., Paterson 4, N. J. Monsanto Chemical Co., 1700 S. Second St., St. Louis 4, Mo. Moretex Chemical Products, 314 W. Henry St., Spartcasburg, S. C., P.O. Box 2528 (A division of Moreland Chemical Co.) Moreland Chemical Co. (See Moretex Chemical Products Co. above. Morton-Withers Chemical Co., 2110 High Point Rd. Grensboro, N. C. Natione, Inc., 515 Madison Ave., New York 22, N. Y. (Sales agent for W. A. Cleary Corp.) Nalco (See National Aluminate Corp.) National Aluminate Corp., 6216 West 66th Pl., Chicago 38. Ill. National Aniline Division of Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y. National Cylinder Gas Co. (See Girdler Co., a division of.) National Lead Co., (See Baroid Division.) Necse Chemical Co., Lock Haven, Pa. (Formerly Pedlow-Nease Chemical Co.) Ninol Laboratories, Inc. (A division of Stepan Chemical Co., Prudential Plaza, Chicago 1, Ill.) Nopco Chemical Co., 706 Industrial St., Harrison, N. J. (See also Griffin Chemical Co. division.) Northwestern Chemical Co., 120 N. Aurora St., West Chicago, Ill. Nuodex Products Co., 830 Magnolia Ave., Elizabeth, N. J. (A divisicn of Heyden Newport Chemical Corp.) Nyanza Color & Chemical Co., Inc., 109 Worth St., New York 13. N. Y. Oakite Products, Inc., 19 Rector St., New York 6, N. Y. Oil States Petroleum Co. (Company discontinued. Products carried by Charles T. Faas, Inc.) Olin Mathieson Chemical Corp., Mathieson Bldg., Baltimore 3. Md. (See also Blockson Chemical Co.) Onyx Oil & Chemical Co., Warren & Morris Sts., Jersey City 2, N. J. Oronite Chemical Co., 200 Bush St., San Francisco 20. Calif. Ottol Oil Co., 455 Cortlandt St., Belleville 9, N. J. Peck's Products Co., 610 E. Clarence Ave., St. Louis 15, Mo. Pedlow-Nease Chemical Co. (re-named "Nease Chemical Co.") Pennsylvania, Detergents Co., 274 E. Ashmead St., Philadelphia Pennsylvania Refining Co., Butler, Pa.
Pennsalt Chemicals Corp., Three Penn Center, Philadelphia 2, Pa. Perkins Soap Co. (See Berkshire Color and Chemical Corp.) Perry Brothers, Inc., 61-62 32nd Ave., Woodside 77, N. Y. Petrochemicals Co., 1825 E. Spring St., Long Beach 6, Calif. Petrolite Corp. (Division of Tetrolite), 369 Marshall Ave., Webster Groves 19. Mo. Pfizer Chas., & Co., 630 Flushing Ave., Brooklyn 6, N. Y. Pilot California Co., 215 W. 7th St., Los Angeles 14, Calif. Planetary Chemical Co. (not active at present)
Process Chemicals, Inc., 8733 South Dice Rd., Los Nietos, Calif. Procter & Gamble Co., P & G Bldg., 301 East 6th St., Cincinnati 2. O. Proctor Chemical Co., P. O. Box 1326, Salisbury, N. C. Protean Chemical Corp., 150 Nassau St., New York 38, N. Y. Proven Products, P. O. Box 734, Peabody, Mass. Puget Sound Pulp & Timber Co., Bellingham, Wash. Purex Corp., 9300 Rayo Ave., South Gate, Calif. Quaker Chemical Products Corp., Conshohocken, Pa. Royette, Inc., 261 E. 5th St., St. Paul 1. Minn. Refined Products Corp., 624 Schuyler Ave., Lyndhurst, N. J. Reilly-Whiteman-Walton Co., Conshchocken, Pa. Remsen Chemical Co., Oceanside, N. Y. (out of business). Riches-Nelson, Inc., 342 Madison Avenue, New York 17, N. Y. *Ritter Chemical Co. 493 W. Main St., Amsterdam, N. Y.

^{*}Producers of acid and oil-layer petroleum sulfonates or animal and vegetable sulfonates.

Roberts Chemicals Inc., Nitro, West Va. Robinson Wagner Co., 110 E. 42nd St., New York 17, N. Y. Rohm & Haas Co., Washington Square, Philadelphia 5, Pa. Royce Chemical Co., Carlton Hill, N. J. Salem Oil & Grease Co., 60 Grove St., Salem, Mass. Sandoz, Inc., 61 Van Dam St., New York 13, N. Y. Scher Brothers, P. O. Box 538, Allwood Station, Clifton, N. J.

*Scholler Bros., Inc., Collins & Westmoreland Sts., Philadelphia 34. Pc. Sharples Chemicals (A division of Pennsalt Chemicals Corp.) Shell Chemical Corp., 380 Madison Ave., New York 17, N. Y. 'Shell Oil Co., 50 W. 50th St., New York 20, N. Y. *Sherwood Relining Co., 1 W. Forest Ave., Englewood, N. J. *Siddall, Geo. F., Co., P.O. Box 975, Providence 1, R. I. Sinclair Chemicals, Inc., 600 Fifth Ave., New York 20, N. Y. Sinclair Chemicals, Inc., 600 Fifth Ave., New York 20, N. Y. Sinclair Manufacturing Co., Brown & Woodland Aves., Toledo, O. 'Sinclair Refining Co., 600 Fifth Ave., New York 20, N. Y. 'Socony Mobil Oil Co., 26 Broadway, New York 4, N. Y. Sole Chemical Corp., 27 E. Monroe St., Chicago 3, Ill. 'Soluol Chemical Co., Inc., Green Hill & Market Sts., Natick, R. I. Sonneborn, L., Sons, Inc., 300 Fourth Ave., New York 10, N. Y. 'Southern Sizing Co., P.O. Box 391, Campbell St., East Point, Ga. Standard Chemical Co., 3583 Aramingo Ave., Philadelphia 34, Pa. Standard Chemical Products, Inc., 1301 Lefferson St., Hoboken, N. I. Standard Chemical Products, Inc., 1301 Jefferson St., Hoboken, N. J. Standard Oil Co. of California (See Oronite Chemical Co.)
*Standard Oil Co. of Ladiana, 910 S. Michigan Ave., Chicago 80. Standard Scientific Supply Corp., 808 Broadway, New York 3, N. Y. Standard Scap Co., division of Concord Chemical Co., 205 S. Second St., Camden, N. J. Stepan Chemical Co., 427 W. Randolph St., Chicago 6, Ill. (See also Ninol Chemical Co. a division of.) Sterling Drug, Inc. (See Sterwin Chemicals, Inc.) Sterwin Chemicals, Inc., 1450 Broadway, New York 18, N. Y. (A subsidiary of Sterling Drug, Inc.)

Stresen-Reuter, Fred'k. A., Inc., 325 W. Main St., Bensenville, Ill.

Sun Chemical Corp., 750 Third Ave., New York 17, N. Y. (See Wczwick Chemical Co.) Sun Oil Co., 1608 Walnut St., Philadelphia 3, Pa. Surfacto Co., Box 114, Blue Island, Ill. Swift & Co., Union Stock Yards, Chicago 9, Ill. Synthetic Chemicals, Inc., 335 McLean Blvd., Paterson 4, N. J. Synthron, Inc., Ryan Ave., Ashton, R. I. Tanatex Corp., Belleville Turnpike, Kearny, N. J. Tex-Chem. Co., 20-21 Wagaraw Rd., Fair Lawn, N. J. Tennessee Corp., P.O. Box 2205, 617-Grant Bldg., Atlanta 1, Ga. *Producers of acid and oil-layer petroleum sulfonates or animal

*Texas Co., P.O. Box 2332, Houston 1, Tex. Theobald Industries, P.O. Box 72, Harrison, N. J. Thompson Chemicals Corp., 3028 Locust St., St. Louis 3, Mo. Thompson-Hayward Chemical Co., 2915 Southwest Blvd., Kansas City 8, Mo. Titan Chemical Products, Inc., Mill Rd. & Wayne St., Jersey City 6, N. J. (P.O. Box 711, Journal Sq. Station.) *Toms River-Cincinnati Chemical Corp., P.O. Box 71, Toms River, N. I. N. J.

'Trask. Arthur C., Co., 4103 S. LaSalle St., Chicago 9, Ill.

Treplow Products, Inc., 59 Camden St., Paterson, N. J.

Turco Products, Inc., 6135 S. Central Ave., Los Angeles 1, Calif.

Turner, Joseph. & Co., Ridgefield, N. J.

Ultra Chemical Works, Inc., 2 Wood St., Paterson 4, N. J. (A subsidicry of Witco Chemical Co.) Union Carbide Chemicals Co., 30 East 42nd St., New York 17, N. Y. (A division of Union Carbide Corp.) Universal Chemicals Corp., Lonsdale, R. I. Universal Detergents, Inc., 1825 E. Spring St., Long Beach 6, Calif. Utility Chemical Co., 145 Peel St., Paterson 4, N. J.
Vanderbilt, R. T., Co., 230 Park Ave., New York 17, N. Y.
Van Dyk & Co., 11 William St., Belleville 9, N. J.
Vc.ley & Sons, James, Inc., 1200 Switzer Ave., St. Louis 15, Mo. Versenes, Inc., Products under Dow Chemical Co.)
Vestal, Inc., 4963 Manchester Ave., St. Louis 10, Mo.
Victor Chemical Works, 155 N. Wacker Drive, Chicago 6, Ill.
Visco Products Co., Inc., 2600 Nottingham at Kirby, Houston 5, Tex.
Warwick Chemical Co., Wood River Junction, R. I. (A division of Sun Chemical Corp.) White & Hodges, Inc., 2 Wellington Ave., Everett 49, Mass. White Laboratories, Inc., Kenilworth, N. J. Whitfield Chemical Co., 14225 Schaefer Highway, Detroit 27, Mich. Whittaker Clark & Daniels, Inc., 260 West Broadway, New York 13. N. Y. (New York representatives of American Colloid Co.) *Whittemore-Wright Co., Inc., 62 Alford St., Charlestown 29, Mass. Wica Chemicals, Inc., P.O. Box 506, Old Concord Rd. Charlotte, Wilson Martin, a division of Wilson & Co., Snyder Ave. & Swanson St., Philadelphia 48, Pa. Winthrop Laboratories, 1450 Broadway, New York 18, N. Y. (A subsidiary of Sterling Drug, Inc.; Witco Chemical Co., 122 E. 42nd St., New York 17, N. Y. (See Emulsol Chemical Corp., a division of, and Ultra Chemical Co., a subsidiary of.) Wolf, Jacques, & Co., Passaic, N. J. Wyandotte Chemicals Corp., 1609 Biddle St., Wyandotte, Mich. Wye Industries, 6 General Devine Way, Boston 27, Mass. "Zurn. O. F., Co., 2736 N. Broad St., Philadelphia 32, Pa.

New Laundry Starch

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A new commercial laundry starch, called "Sta-Flex," was developed recently by A. E. Staley Manufacturing Co., Decatur, Ill. The product, which is said to be especially suited for use on shirts, is claimed to minimize press build-up and down time for cleaning, wash out easier, and eliminate scum and cooker residue. Other properties attributed to "Sta-Flex," are greater film clarity for color brightness, thorough penetration and non-congealing qualities that reduce smears and surface starch.

European Soap Output

(From Page 52)

Only 50 per cent of the soap industry's capacity was used during the greater part of 1956. Increased demand in the last quarter of 1956 resulted in some improvement which continued during the first months of 1957.

Trend of demand in the soap industry was stable during the first three quarters of 1956 but events in Middle East radically changed the situation and over the year as a whole demand for soap products was up six per cent. Demand for synthetic products continued to grow in 1956; it was up 13 per cent over 1955. Increase in 1955 over 1954, however, had been 16 per cent. Overall demand for soaps and synthetics rose by eight per cent in 1956. Estimated consumption in O.E.E.C. countries except Greece, Ireland, Sweden and Turkey per head of population in kilos is shown in table 4. Per capita consumption of toilet soap and household soap products over a period of eight years is shown in table 5.

Foreign trade statistics for

member countries exhibit a continued trend towards shrinking soap exports and growing exports of synthetics. (Tables 6 and 7). Compared with production, foreign trade in glycerine is considerable with imports amounting to 20,000 tons and exports to 10,000 tons. The 10 countries for which glycerine data are available are net importers of that material. The Chemical Industry in Europe, published by O.E.E.C., 2, rue Andre-Pascal, Paris, price \$3.00.

Household Soap Sales

(From Page 54)

So much then for a review of the most common errors in marketing as we see them revealed by our reports. I think you'll agree that they're easy to make and that most of us have been guilty of committing one or more of them on occasions. So to help us all avoid these costly marketing errors in the future, I would like to offer for your consideration a simple check list. This list has been designed to help you appraise your own product versus your competitors' offerings. I can say that this score sheet has already helped several of our clients. You will, of course, want to tailor the various points to fit your requirements based on your own more exact knowledge of your own industry. Here is how it works.

First list everything you can think of which might contribute to —or detract from—a product's overall effort. For example, under product quality, you might want to add such factors as color, flavor, texture, odor, taste, viscosity, durability, and so on.

Next, consider your pricing structure at all levels of your distribution.

Compare your promotion—a most important phase of your whole marketing program. Take into account consumer advertising, trade advertising, as well as your other promotions.

Consider your sales organization—and the availability of your product. In self-service selling, the size and location of inventories in retail stores is of great importance.

Next — devise appropriate weights for each one of these points —based on your own knowledge of your industry. They will, of course, differ from industry to industry and even within commodity lines. Each subheading would be apportioned to reflect its importance.

Finally compare your brand on each of these points against your major competitor and any brand which is showing strong advances. Wherever possible, base your score on facts rather than your own opinion. Try to put yourself in the place of your customers—appraise your product's image in the customer's mind.

When the scoresheet is complete we should have uncovered our major marketing weaknesses. It is

important to remember, however, that in order for a brand to grow in share of market it must at least equal its competitors on all of the major phases of marketing and excel its competitors on some. Once discovered these weaknesses can be closely examined — corrected — and your over-all position strengthened.

In summary, I have tried to emphasize that we are doing business in a world of rapid change. Consequently our job is getting more complex—hence the need for more factual information and aids to our judgment if we are to sidestep the many costly marketing errors which can plague us.

I hope the scoresheet to ap-

praise your marketing operations will be of use to you. In the event that an objective appraisal indicates the need for major moves on your part – the risk involved in the change may be reduced through the use of controlled market tests.

We have a real challenge ahead of us—to keep pace with the flood of new developments and new demands. The future will call for every ounce of ingenuity and marketing skill we can muster. I am confident that all of us—those in sales and merchandising, your partners in advertising, and those of us in research—all of us, working as a team, will find the ways and means to meet these challenges.

rand	Marketing	Analyzer	

Salas Infloresian Paster	387-1-34	Your score vs. major	Your score vs. new competitor (who is advancing)
Sales Influencing Factors	Weight	competitor	(who is advancing)

I. PRODUCT:

Quality
Performance
Range of Sizes &
Types Offered
Packaging
Brand Name
Label
Production Facilities

II. PRICE AND DISCOUNTS:

Wholesale Retail Consumer

III. PROMOTION: Consumer Advertising

Amount
Appeal
Quality
Media
Frequency

Duration Trade Advertising

Amount
Quality
Frequency
Duration
Other Promotions

Consumer Deals
Sampling and Couponing
Trade Deals
Cooperative Advertising &
Display Allowance
PM's
Guarantee of Floor Stocks

IV. SALES ORGANIZATION: Direct Selling Organization

Size Skill Enthusiasm (aggressiveness) Broker Organization Wholesaler Support

V. AVAILABILITY:

Total Distribution Individual Item Distribution Size of Inventory per Store Location of Inventory in Store Frequency and Size of Goods and Advertising Displays Here's why WEST END can answer your inquiry on product availability immediately!

When you phone an order or request information on current availability 👚 🚔 🚊 or long term supply 🔦 a product, the Sales Office Manager in Oakland with whom you speak can contact the plant at west end immediately. He talks by private wire teletype Production Manager. An answer or firm commitment is given immediately. It is relayed to you often while you are still on the phone. WEST END 's Sales Office Manager sales representatives and plant executives work together as a team manning a system that is, in our opinion, uniquely outstanding in the chemical industry. Their confidence in the efficiency of this system is reflected in the enthusiastic, helpful and friendly manner in which they promptly serve you . . . our customers.

WEST END CHEMICAL COMPANY
DIVISION OF STAUFFER CHEMICAL COMPANY
1956 WEBSTER, OAKLAND 12, CALIF. PLANT, WESTEND, CALIF.

SODA ASH
SODIUM
SULFATE
BORAX · HYDRATED LIME

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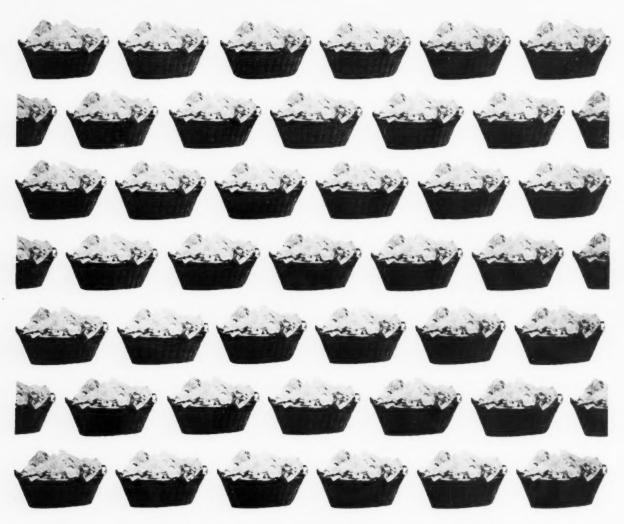
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Formula for washing 1000 tons of laundry!



... and blend with suitable builders, foamers or other additives. You'll have a product tailored to do tons of wash—scrub acres of floors—or do any of a hundred jobs in home, industry or agriculture.

SURFONIC products comprise a broad range of nonionic ethylene oxide adducts of nonyl phe-

nol (SURFONIC N Series) and tridecyl alcohol (SURFONIC TD Series). Ranging from watersoluble liquids to waxy solids, they can be blended or reacted to provide a full spectrum of surfactant products.

Jefferson's Surfonic surface-active agents can be selected to give the degree of hydrophilic or hydrophobic properties you need. Their properties and typical applications are described in a comprehensive new Jefferson bulletin, "Surfonic Surface-Active Agents,"

which may be obtained upon request. Jefferson Chemical Company, Inc., 1121 Walker Avenue, Houston 2, Texas.





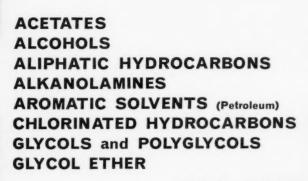
Ethylene Oxide,
Glycols, Dichloride
Ethanolamines
Morpholine
Piperazine
Polyethylene Glycols
Nonyl Phenol
Surfonic®
Surface-Active Agents
Ethylene Carbonate and
Propylene Carbonate
Caustic Potash
Caustic Soda
Soda Ash
Sodium Bicarbonate

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Key man in the success of any effort to expand sales of automotive chemical specialties is the service station attendant. Convincing him that he can make a larger profit on automotive specialties than on gasoline has been and probably will be the biggest hurdle for marketers to overcome. See article on page 81.



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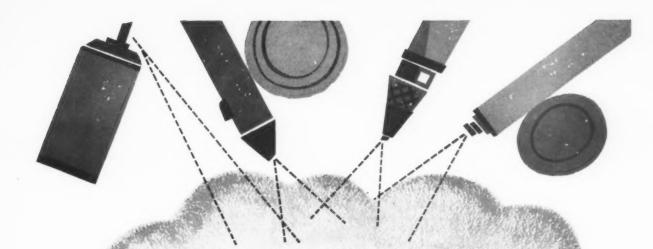
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APRIL, 1958

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Modern service stations, such as those of BD Canada, Ltd., which feature colorful translucent canopy over gasoline pumps, are attracting more and more motorists. But are modern methods of selling auto-

motive chemical specialties included? Canopy, in photo above, supplied by Durez Plastics Division of Hooker, is made of fiberglass-reinforced corrugated sheets of fire retardant "Hetron" polyester resin.

Marketing Automotive Specialties

NHE subject of this paper, "The Marketing of Automotive Chemical Specialties", sounded harmless and simple enough when I agreed originally to discuss it. As I began to analyze and dissect it, however, I realized that it is a complex and almost monstrous field of endeavor. Because of its complexity, I think it is best to segregate it into several simple divisions and discuss them one at a time. We shall make no attempt to approach the entire field with one type of marketing effort, because it doesn't lend itself to such consideration.

Before beginning the discussion of special marketing techniques, let us define the term "automotive chemical specialties". In this article they are considered to include all types of automotive maintenance materials except fuels and lubricants, cooling system antiBy C. E. Allderdice, Jr.*

The Bell Co. Chicago

freeze, and auto body paints and related materials. On the positive side, automotive chemical specialties include here auto polishes and waxes, cooling system chemicals, and miscellaneous items such as gasket compounds, fuel system antifreeze, windshield washer solvent, etc.

Polishes and Waxes

AUTOMOBILE polishes and waxes are the oldest group of automotive chemical specialties, having been used almost from the time the first automobile was built. While there are no accurate statistics on wax and polish sales, it is probably correct to say that almost every car built since the beginning of the industry has had polish applied to it at one time or another during its life. A large percentage of present day cars are

polished consistently over a period of several years, frequently as often as four or five times a year. As a result of such a widespread desire on the part of car owners to have good looking, well polished automobiles, the polish market of today accounts for literally millions of individual cans of polish.

In this discussion we shall assume that the polishes and waxes under consideration all function properly and in a satisfactory manner. Therefore we shall not discuss product properties since this could be the subject of several papers. Rather let us confine ourselves to marketing techniques.

Probably the first matter to consider is the package in which the polish or wax is to be sold. Since these materials are to be used for the broad, general purpose of cleaning, the package should have a "clean" appearance. By that is meant a choice of colors which we associate with cleanliness—the light colors: white, yellow,

^{*} Paper presented Dec. 11, 1957, during the 44th annual meeting of the Chemical Specialties Manufacturers Association, Hollywood, Fla.

gray; the pastels of yellow, light green, light blue, etc.—should predominate. It is psychologically important to give the customer the impression that the product is intended for cleaning and, that as a matter of fact, it does clean, by providing as many favorable associations as possible. Hence, choice of colors on the container can serve a very important first step in marketing.

Since the American public does such a large part of its shopping in supermarkets and grocery stores, where it sees the most attractive packages available, colors on containers become doubly important. The public has been well educated in and conditioned to attractive, "clean-looking" packages used by manufacturers of soaps, synthetic detergents, tooth pastes, cosmetics and deodorants. Because of their rich experiences in shopping and exposure to good package design, American shoppers are quick to be influenced by attractive packages of automobile polishes and waxes. These products to a large extent can and should be impulse items. To make them so, we must appeal to those allimportant shoppers, Mr. and Mrs. America. They are responsible for vari-colored automobiles; for modern, attractive upholstery materials

in cars; for the tremendous popularity of whitewall tires. The same tastes and desires which demanded and accepted these innovations also demand attractive packages.

The next phase of marketing automobile polishes and waxes is the channels of distribution to be used. Because of the widespread use of car polishes and waxes by the motoring public, the sales outlets for them are varied and farflung. These products are sold in automotive stores, service stations, chain stores, car dealers, department stores, variety stores, hardware stores, grocery stores, supermarkets, drug stores, and other miscellaneous outlets. Because of these diverse retail outlets, it is necessary for the manufacturer to have a sales organization which can cover all of these channels; or, at least, such part of them as he wants to sell. Full coverage of all possible retail outlets for polish and wax requires a large, welltrained, versatile sales organization; and therein lies the major marketing problem for all but the largest polish and wax manufacturers. Such a sales force is expensive to maintain, and can exist only if it produces large volume sales. Probably the best solution for the smaller manufacturer is to select a portion of the market and

expand his effort in a less elaborate way; but one which may still give him a share of the polish business.

A necessary factor in marketing automobile polishes and waxes is constant persuasion and inducement, not only to the car owner, but to the personnel of distributors, wholesalers and retailers involved in the marketing. The basic reason for this is probably that the car owner associates polishing a car with hard work, and, consequently, he does not feel an inner urge nor a compelling necessity to buy polish and use it. Rather, he must be persuaded, or forced, to buy it. Hence, huge sums of money must be expended to keep the merchandise flowing into the hands of the public. These expenditures take the forms of direct advertising to the public via television, radio, magazine, newspaper, and billboard; advertising to distributors, wholesalers and retailers in trade papers; direct mail advertising to the trade; incentives to the employees of distributors, wholesalers and retailers in the form of merchandise premiums or cash payments; and "free goods" offers to the distributors, wholesalers and retailers themselves.

The movement of auto polishes and waxes through marketing channels depends on the use of all, or at least some, of the above methods of persuasion. If the manufacturer is not prepared to employ some of them—preferably all of them—he should not attempt to market automobile polishes and waxes, because his efforts will be doomed to failure.

Now for a look at the future of this part of the automotive chemical business. Cleaning and polishing materials for automobile exteriors will be used as long as cars are driven and parked outdoors and thus exposed to the weather, road film, tree sap, atmospheric dust, etc. That means that the market will grow in proportion to the car population; but it may not necessarily consist of

Advances made in packaging of household chemical specialties sold through supermarkets and hardware stores have their counterparts in automotive specialties.



the same products we now have. For instance: what change if any, do the new acrylic finishes portend? Do they mean the end of polishes as we have known them? Will they require waxing, or are they sufficient unto themselves? Will future auto polishes be more in the nature of detergent solutions rather than present day abrasive cleaners?

I offer these questions as a challenge to Chemical Specialties Manufacturers Assn. 1 feel that as an association we should help our members determine the answers to them and thus provide the best possible products for use by car owners.

Cooling System Chemicals

LET us next consider the market-ing of cooling system chemicals. This group of products, by nature, tends to move through retail outlets which offer service to the car owner. Such outlets are primarily service stations and car dealers, both of which have the know-how and the facilities for getting under the hood and servicing the cooling systems. Hence, our sales effort in this field must be applied strongly to the trade, as well as to the individual car owner. It is very likely that the sales people employed by service stations and car dealers produce, or at least greatly influence 80 to 90 per cent of the sales of cooling system chemicals.

Because of this situation. container design and color are not quite as important as in the case of polishes, but they still are important to the do-it-vourself trade. Shade and general ability of containers are also of prime importance here. Cooling system chemicals lend themselves to marketing in non-reusable containers, since one full can is the treatment in most cases. Such containers are usually of the least expensive type, and thus commend themselves from the profit angle.

Since cooling system chemicals are sold to such a great extent through service outlets, ad-



Timely, attractive displays of automotive chemical specialties that can be seen easily by Photo by E. I. du Pout de Nemours & Co.

vertising and promotional efforts dise premiums and cash payments must largely be directed to the sales employees of distributors, wholesalers, and retailers. The sale of cooling system chemicals in volume depends to a very great extent on specific efforts directed to the car owner in an attempt to persuade him that he should purchase preventive maintenance for the cooling system of his car. He must be convinced that the cooling system of his car must be cleaned before adding antifreeze; that a can of sealer should be added along with antifreeze as insurance against loss from seepage; that his automobile is so valuable he should stop corrosion losses by the addition of cooling system inhibitor. The task of persuading him falls largely to the man who directly deals with the car owner -the attendant at the service station island, or the service salesman for the car dealer.

Hence, a large proportion of all sales effort in this field must be directed to these two important men. Without their enthusiastic support and aggressive effort the marketing of cooling system chemicals could not possibly go forward in significant volume. In order to gain their favor, they are often rewarded with merchan-

for their efforts in behalf of a particular product, or line of products. In spite of all the arguments pro and con, this type of sales effort is used by the leading manufacturers to move cooling system chemicals because of the intense persuasion required to sell them to the car owner. Sales people on the firing line must be paid for their time and trouble.

It appears to me that the marketing of cooling system chemicals offers a tremendous challenge to our industry. With some 60,-000,000 motor vehicles on the road. all water-cooled, why shouldn't their cooling systems have two cleanings a year-spring and fallthus requiring 120,000,000 packages of cleaner? Why shouldn't those vehicles consume at least one can of sealer per year as preventive maintainance? Is it dreaming too much to hope to prevent corrosion in 60,000,000 cooling systems?

Perhaps our industry must find some way to supplement the intense sales effort we exert on this trade in order to reach the car owner to a greater extent. The possibilities on this phase of our business are tremendous.

(Turn to Page 175)



Concept

Empty beverage shells are sprayed automatically with roach repellent in Coca Cola bottling plant at Richmond, Ind. This treatment prevents roaches from infesting wooden cases and riding them back to plant, thereby endangering plant sanitation.

N the face of it, the concept of insect repellency is a simple one. When a repellent is applied, the insect goes elsewhere. The longer the insect stays away, the more effective the repellent. Elementary.

Unfortunately, the subject is not always quite so simple. Repellency, except against mosquitoes on human skin or on fabrics, is relatively new. Like every new development it requires amplification.

When concentrated vitamins were introduced, some were led to believe that all man's nutritional requirements could now be compressed into one tiny pill. When penicillin was announced, many of the lay public thought that it would be effective against every ailment in the medical books and disease was a thing of the past. DDT, it will be recalled, was going to end all insect problems once and for all.

These misconceptions were not the fault of the research laboratories, nor were they necessarily the fault of the advertising copywriters who promoted the materials. They were largely the fault of the public itself . . . a public which often reads fantasy into fact.

First, a few definitions. An

insect repellent is a substance which insects do not like to approach or touch. (It is doubtful that odor, color, or taste greatly affects its performance, though all these senses may be involved in some degree. However, touch is the sense which seems to be most directly involved.)

Another definition. Effective repellency is that degree of performance at which the derived economic gain or physical comfort is significant. If 100 roaches are resting on one wall and only 90 on the adjacent treated wall, significant repellency has obviously not been attained. If 20 stable flies attack an untreated cow and only 18 attack a treated cow, that cow is not repellent according to definition, since 18 flies will probably affect milk production and physical comfort as much as 20. Ten per cent repellency under these conditions is not effective repellency.

If, on the other hand, one wall shows 100 roaches and the treated one has only a few, then the treated wall is repellent. If the treated cow has one or two stable flies, as compared with 20 on the check, economic gains are derived due to greater comfort for the animal and consequently greater

milk production. This is effective repellency.

To be evaluated realistically, the concept of insect repellency should be viewed dispassionately. Results should be appraised accurately. The Salk polio vaccine was originally claimed to be about 85 per cent effective. To the lay public, by some peculiar mental quirk, 85 per cent came to mean 100 per cent. Accordingly, when a few cases were reported of inocculated subjects contracting the disease, whispers of failure were heard in some quarters. Today we know that the vaccine was by no means a failure. We have at last educated ourselves to the fact that 85 per cent effectiveness does not mean 100 per cent . . . but that it is much, much better than zero per cent effectiveness.

The same lesson applies to insect repellency. Ninety per cent repellency is not to be construed as 100 per cent repellency. Because one fly alights on a treated surface, it must not be assumed that the repellent effect has disappeared.

The observer needs to be conditioned to realize that repellency is relative . . . not absolute. The trained observer should appreciate readily that five flies on a given surface represent a consider-

of Insect Repellency

By Joe Abrams and Z. Z. Dworkin

Glenn Chemical Co. Chicago

able improvement over 50 or 100 flies on the same surface. Yet failure has been reported when actual results showed as much as 95 per cent repellency. These observers were measuring the duration of 100 per cent repellency instead of the duration of effective repellency.

An even more serious misconception occurs when insect repellency is confused with insecticidal activity. For example, a number of workers have compared insecticides with repellents, making the mistake of weighing the results on the same scale. Actually, they are no more comparable than a knife and a pair of scissors. Each is designed to perform a different task in a different way.

In evaluating insecticides, their ability to *repel* insects is not a proper measure of effectiveness. By the same token, repellent activity is not measured by recording knockdown and mortality. (Yet it has been done.) One does not necessarily apply a repellent exactly as he would an insecticide. (Yet it has been done.)

When an ordinary insecticide is applied as a space spray in an enclosed area, doors and windows are normally closed. They remain closed long enough to permit the toxicants to reach all parts of the enclosed premises without escaping. While this is occurring, the insects die. But when the doors and windows are subsequently reopened, more insects soon return.

What happens when a repellent is likewise applied? Noth-

ing. Absolutely nothing. With the doors and windows closed, the insect has no place to go. His only choice is to adjust or die. Since the repellent does not kill, he adjusts. The insect's sensory receptors are coated with repellent. He becomes desensitized (more about this phenomenon later), possibly moribund. His whole universe is repellent. But with no means of escape he remains in the treated room. Moral: A repellent is not an insecticide and should not be applied as an insecticide. Windows and doors should not be closed-they should be opened to give the insects an avenue of escape. When the conditions are proper-that is, when doors and windows are open-a repellent space spray application produces dramatic results. Flying insects

leave the premises at once.

One of the most convenient methods of applying insecticides is through a fogging device which delivers small particles of chemical to all parts of the area. Some of the particles hang suspended in the air to contact the flying insects. Other particles drift to the floor. A few, relatively very few, come to rest on the walls or ceiling. Unfortunately, results are not usually long lasting because a residual film is not deposited on the surfaces where insects rest.

The same physical limitations apply to repellents. When the chemical is thinly fogged or applied as a fine mist or spray, results are immediate. Flying insects leave the area immediately, but the repellency is not residual. As with insecticides, the small particles fall to the floor instead of coating the vertical surfaces. It is probable that repeated foggings at frequent intervals will leave a residual deposit on surfaces, though this remains to be demonstrated.

What, then, are the advantages of using a repellent in place of a killing agent in a fogging application? Economy, safety, and no unsightly dead or dying insects on the premises.

If an insect is to be repelled for long periods from a surface,

Repellents are particularly useful around dairy barns since cows sprayed with such products are spared the annoyance of flies which enter unscreened barns.





Very convincing demonstration of roach repellent's efficacy. Paper marked with "T" has been treated with Glenn's product "Tabutrex." Untreated papers, covered with roaches, marked with asterisk.

that surface must be wholly treated. Partial treatment is only partially effective. Sooner or later the insect will find the untreated portion and come to rest comfortably upon it. To be effective at its optimum level, a repellent should be uniformly applied to the entire surface.

There are several degrees of repellency. When the material is first applied it volatilizes to some extent, and this vapor in itself repels. A flying insect will be seen veering sharply away from a freshly treated surface when he is inches away. A roach or an ant avoids the treated surface before he comes in contact with it. During this stage the surface may be said to be "hot." The next step is "touch-and-go." The insect barely touches the treated surface, then departs at once. The effect is similar to that of a "hot foot." Flies generally make two or three attempts to land, fail, then depart for more attractive areas. Next comes a delayed touchand-go effect. The insect touches, remains briefly, then departs.

Where most of the surfaces of an enclosed area have been treated with a repellent, incoming flies do not often remain for very long. Observations show that they enter, attempt a few tentative landings, circle the area briefly, then depart. Fly populations in the area are thereafter quite low. This is true even when the vapor phase repellency has long since disappeared.

Evaluation of an insect repellent should properly be based upon total effectiveness. For example, when flies are able to rest on inanimate surfaces . . . wood, brick, glass, metal, for indefinite periods of time, one can justifiably state that the repellent effect is gone. When a fly is able to alight and rest on a treated cow, however, this conclusion is not necessarily correct.

It has been observed that biting flies such as stomoxys calcitrans often show a decided reluctance to withdraw blood from cattle which have been treated with repellent some time in the past, even when they are able to alight and rest on the hairs of the animal. The suggestion has been made that while the repellent has possibly been removed from the outer surfaces of the hair, an effective quantity still remains on the protected hide. Therefore, while the fly may rest comfortably on the hair, it is often immediately repelled when the proboscis probes past the hairs and comes in contact with the hide. It would seem reasonable, in view of this rationale, to consider this as continued effective repellency. Fly counts on livestock, therefore, are not in themselves necessarily conclusive evidence of the effectiveness of the spray being used. Best evidence is a study of the comfort or discomfort of the animal . . . swishing of the tail, huddling together for protection, biting, kick-

Another demonstration of the effectiveness of one commercial product. Dish on left, of course, has been treated with the insect repellent against roaches.

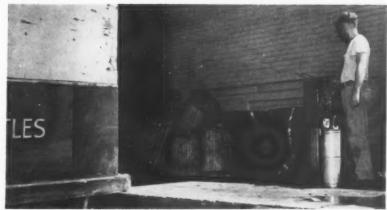


ing, as well as a study of levels of milk production and weight gain.

Observers have noted other seeming contradictions in the field use of repellents. When fine mists are sprayed in enclosed barns, for example, results have sometimes been confusing. The pattern of effectiveness goes temporarily awry with flies alighting on treated and untreated surfaces alike. After an hour or two, order is again assumed, and the flies once more avoid the treated surfaces.

This phenomenon has been carefully studied and the causes elucidated. Desensitization seems to be the answer. The sensory receptors of the insect are covered with the newly sprayed irritants suspended in the air, and the fly thereupon loses his sense of discrimination, unable to distinguish between repellent or attractive surfaces. All surfaces become equally unpleasant, and therefore no pattern of repellency is apparent. Tests show that a short time later, when the receptors are freed from the irritant, the insect becomes sensitive once more and is repelled from the treated surfaces.

Still another condition which influences repellency is weather. Some species of insects, notably the housefly, are especially active when the temperature is favorable, inactive when the climate is too cool or too hot. The conditions in



Insect repellent being sprayed around loading dock of large Chicago bottling plant. Flies are repelled from entire area since they cannot alight on the treated surfaces. Such treatment virtually eliminated entry of flies into plant through dock's doors.

which they are most active are also the conditions under which they are most sensitive to repellents. Thus, repellents are most effective against the housefly when the temperature is in the range of 75° to 90°F, somewhat less effective under cooler or hotter conditions. This correlation is probably true of most other susceptible insects as well.

It is essential, too, that the habits of the insect be considered. The operator must take into account the resting places of the insect, his hours of greatest activity, whether the insect crawls or flies. Houseflies, for example, are attracted to doors, windows, warmth, and these attractive areas should be treated. The three-dimensional

world of the fly offers an easy escape from a repellent surface . . . he simply increases his altitude. In the two-dimensional world of the crawling roach, however, escape is not so easy; he may eventually and accidentally find an untreated surface, or he may not.

The question is frequently asked: "Where does the insect go when the repellent is applied?" To this question there are two answers. (1) Away, if he has an opportunity to escape. (2) If he has no chance to escape, he will go nowhere at all.

For this reason there may well be merit in the suggestion that where crawling insects are concerned a killing agent be included in the formula together with a repellent. This will destroy the insects already on the premises and tend to discourage reinfestations through repellent action.

Where flying insects are to be controlled, a knockdown killer may be included or omitted, depending on whether the user wants to destroy the insects, keep them at a distance, or obtain the combined effect of both.

Insect habits also influence method of application. The stable fly, for example, attacks livestock mainly on the legs and shanks. The horse fly attacks principally on the back and sides. Since a backrubber applies the chemical chiefly on the back and sides (not on the legs and shanks), it is likely to be effective

The tail tells the tale. Cows in foreground have been treated with new cattle spray containing "Tabutrex" insect repellent. They are standing quietly, as indicated by lack of moving tails. Cows in background swishing their tails are untreated.



against the horse fly, ineffective against the stable fly. The same limitations apply to the treadle sprayer which normally cannot direct an effective residual spray against so small and elusive a target as the narrow leg of a cow. The treadle sprayer will, however, be effective against the flies which alight on the back and sides of the cow.

Time of application is important, too. A number of users have reported that they applied the repellent to cattle late in the afternoon. By the middle of the following afternoon, they said, flies were beginning to return to the animal. Although it would seem to require no explanation, perhaps it is just as well to point out the obvious in this case. An animal treated in late afternoon should be highly repellent for the rest of the day, throughout the night, and the following morning, with degree of effectiveness gradually declining. But the 12 hours following application (the most effective period) are almost completely wasted because flies would not be annoying the cattle after nightfall in any case. For this reason, economy dictates that applications to cattle should be made at the morning milking.

This is another question

often asked: "What are the advantages of using an insect repellent instead of an insect killer on livestock?" The all-important reason is that the repellent (provided it is an effective formulation) protects livestock from biting flies before they bite. The insecticide kills the insect after it bites. As a matter of fact, the insect may feed several times before it eventually dies. In the first case, the fly has no chance to inflict discomfort; in the second case, the insecticide provides little or no protection . . . it simply obtains vengeance on the fly for having bitten the cow.

Since almost all generalizations have exceptions, the foregoing has one too. The horn fly. This is one pest which can be residually controlled by insecticides applied to animals. However, the stable fly and horse fly (both vicious blood-sucking insects) cannot be effectively controlled by insecticides applied to the animal. Products which incorporate effective repellents are needed to control these highly annoying pests.

Like everything else, insect repellents need to be evaluated properly and realistically. One pest control operator reported that he was dissatisfied with the product he had used because the material was effective against roaches, under his conditions of use, for only three weeks. How long had his previous treatments of insecticides been effective? A week or less. Then what was the complaint? Well, the formula was not so effective as he wanted it to be.

Another operator was disappointed because he obtained "only two or three days" repellency against insects on screens, results which were far better than with anything else he had ever used. However, he had hoped it would last longer. Screens, incidentally, are most effectively treated with a saturated sponge, cloth, or brush. This treatment will repel insects which would normally alight and rest on them. It will not repel insects which do not alight, but rather circle the lights to which they are attracted. A solution to the problem of night-flying insects circling lamps and electric signs has not vet been found in insect repellents.

In one respect insect repellents are exactly like other products. They require (and how many times must it be repeated?) that directions be scrupulously followed. One user simply stirred the technical grade repellent into a bucket of water without emulsifier, or anything else for that matter, and sprayed it. In this case both the results and the operator were somewhat erratic.

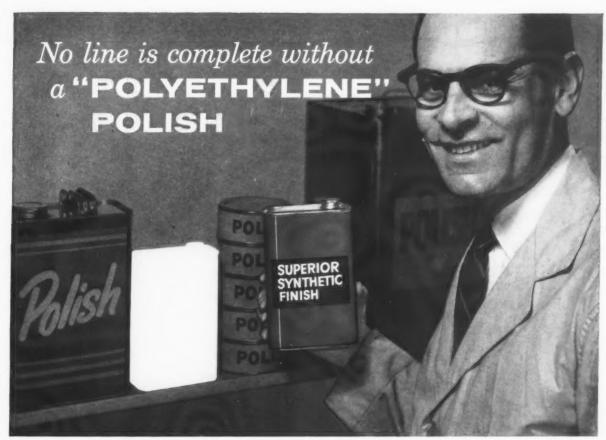
Other users have fogged the material for conditions which virtually demanded a coarse spray. One worker applied the formula to the backs of animals but included stable flies on the legs in his final counts. Others have wondered why water emulsions have washed off exposed surfaces after a heavy rain. There has even been a report of dissatisfaction because the material failed to protect rose bushes from rabbits.

A farmer used one pint of emulsion to spray 19 head of cattle. Directions called for a full quart per animal. Where water is used, the application must be thorough,

(Turn to Page 163)

For optimum results, insect repellent must be applied by hand sprayer to hard-to-get-at spots. Certain areas, such as those shown being treated, are missed by treadle sprays and backrubbers, say the authors.





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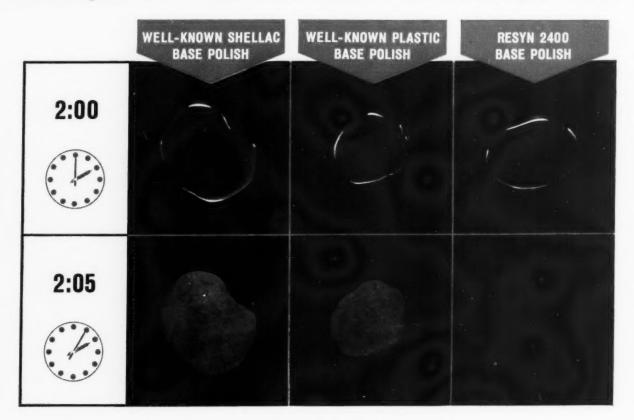
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Wear Evaluation of Floor Finishes

By George J. Fuld and Richard C. Brogle

Department of Food Technology Massachusetts Institute of Technology Cambridge, Mass.

and

Melvin Fuld, Harry C. Broll and Charles Pinchback*

Fuld Brothers, Inc. Baltimore

HE wear testing of various floor finishes was largely subjective until the advent of radioactive wear testing. One technique that has been used is the incorporation of carbon-14 in the fatty acid used as an emulsifier for the finish (1). The product is then applied to a floor surface and the radioactivity read at various intervals with an end window Geiger-Mueller counting tube and amplifier. The major disadvantages of this method are the cost of obtaining the C14 tagged material, the necessity for purchasing relatively expensive counting equipment and the extremely long halflife of the isotope.

The method devised and described by the authors utilizes a short half-life beta emitting isotope. This isotope is readily available, and the method requires only the purchase of a routine survey meter. The counting of samples need not be performed at the site of testing, but can be counted by any organization possessing a Geiger counter with an automatic sample changer and printer.

Experimental Procedure

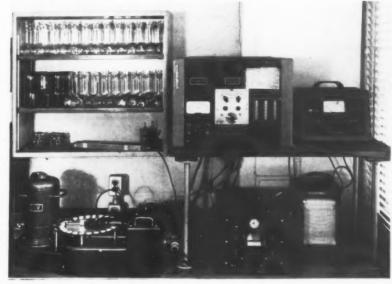
THE isotope used in this work was calcium 45, present as the chloride. Approximately five microcuries (µc) were added to one quart of the floor finish to be tested.

The finish was then applied to a clean test area of light colored rubber tile six feet square. The polish was spread as evenly as possible, as in the recommended use procedure, and allowed to dry overnight before being subjected to foot traffic. The test panels were placed in an office and were subject to fairly even, regular traffic. Initial samples were taken as described below, and at weekly intervals additional samples were taken. The area adjacent to the radioactive finishes was covered with a non-radioactive layer of the same material as that under

test. Samples obtained from this normal area were analyzed for radioactive carryover which would indicate tracking tendencies.

The sampling procedure used on the floor area follows. An area of the floor four inches square (Fig. 4) was marked with a soft lead pencil using a rectangular stencil two inches by two inches. A 1:10 dilution of a specially developed "wax" remover was prepared. A 10 ml. aliquot of the diluted remover was placed in a 25 ml. glass stoppered, graduated cylinder. A thin cylindrical wooden applicator was covered with a small piece of absorbent cotton and

Figure 1. Geiger counter with automatic sample changer and printer (Tracerlab) for counting wax samples in duplicate



⁽¹⁾ Johnson, B. S. Private Communication (1956).

^{*} Paper presented Dec. 10, 1957, during the 44th annual meeting, Chemical Specialties Manufacturers Association, Hollywood, Fla.

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thoroughly wetted with the remover. The two square inch area was repeatedly swabbed with the remover, the swab being continually rinsed in the remover. At the end of the washing, small amounts of distilled water were placed on the area and wiped clean with the same applicator stick. If the procedure is performed carefully, the test area can be cleaned thoroughly. The sample of material was then diluted to 20 ml. in the cylinder.

For reasons of convenience and cost, later studies were made using screw cap, one ounce vials calibrated to 20 ml, with a marking pencil in place of the stoppered cylinder. These can be readily transported to be counted. The end of the swab was left in the vial so that no radioactive material would be lost.

For purposes of counting, a two ml. aliquot from the 20 ml. dilution was placed in a one inch stainless steel counting planchet, which was previously numbered with a metal stamp. The samples were dried carefully at 105°C. to prevent spattering of the sample during ashing, and then ashed for 10 minutes at 600°C.

The samples were counted in duplicate on a Geiger counter with an automatic sample changer and printer (Tracerlab) as shown in Figure 1. All samples were counted a minimum of four times with at least three empty planchets being used for background counts.

The effect of natural radioactive decay was considered in the following manner. Samples were counted, with two samples being chosen from the initial series of counts (four planchets in all) as control counts. These controls were recounted with each successive group of planchets and used to recalculate activity present during the first week. The average counts of the four control samples at the initial time divided by the average count of the same samples, at time t, multiplied by the counts of any samples made at time t calculates all counts back to a basis of time zero. All counts are reported as net

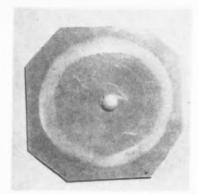


Figure 2. Five inch square of light colored vinyl tile with hole in center.

counts per minute (cpm) above background by subtracting the average of the three background counts from the gross cpm of the samples (background counts with the present equipment are about 20 cpm).

When samples were calculated back to a basis of time zero, a lowering of count in a particular area of the test floor was presumed to be attributable to wear. The per cent wear is taken as the ratio of the count at time t to that in the same area at time zero.

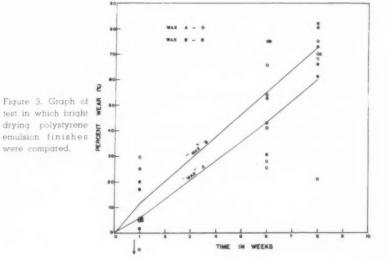
Another technique was also utilized for the comparison of one phase of wear properties. A piece of light colored vinyl tile (Figure 2) five inches square was cleaned and coated with a solvent soluble dye. After drying, a known thickness of finish was applied and the panel dried in a constant humidity room. A center hole was then punched

out. The panel was then placed on a Taber Abrader using a CS-8 wheel. The end point was generally read when there was visual removal of dye from about 50 per cent of the Abrader track, although other percentage removals are always recorded. It is extremely important that the wheels be cleaned thoroughly between individual tests.

Results and Discussion

IN AN effort to evaluate the sampling procedure which was utilized, several tests were made. A sample of finish containing a known amount of Ca⁴⁵ was applied to a square of linoleum tile (OTL) two inches by four inches with an 0.008 inch doctor blade. An average pick-up of radioactivity of from 82 to 91 per cent was obtained by using the swab sampling technique.

A number of actual floor tests have been performed using the technique described. One example is shown in Figure 3. In this test, bright drying polystyrene emulsion finishes were compared. The only difference between these two finishes was in the plasticizer systems utilized. It may be seen that although there is some variation on a point to point basis, all average wear values for "Wax B" are larger than the one for "Wax A". The average wear for polish "A" on the eighth week is 60 per cent (with a standard deviation of



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Figure 4. Test floor area with two inch rectangles that have been marked with soft lead pencil shown in corners of center panel.

seven per cent) and for polish "B" on the eighth week, the average wear is 73 per cent (with a standard deviation of 3.5 per cent). Using the student 't' test there is a significant difference at the five per cent level in the wear properties of the two finishes "A" and "B".

Although there are some differences on a point to point basis in data obtained by this procedure, the errors tend to "level out" if four or more sampling areas are utilized. This point to point variation is undoubtedly caused by uneven wearing on the test floor due to traffic patterns and the fact that the initial finish could not be applied uniformly.

The results obtained by measuring the carryover of the polish tend to show definite trends. However, in the recent studies that have been conducted, the results are not significant because of the low initial activity present on the floor. Counts cannot be taken as significant unless they are about five per cent above background, which in this case is about one cpm. In all cases studied, there has been some activity found on the surrounding areas (carryover) if the experiment is conducted for a sufficiently long period. However, to allow definite comparisons between the tracking properties of

any floor finish, approximately a 10-fold increase in the added activity to the parent material should be made.

A number of panels were run with the Taber Abrader test



Figure 5. Test floor panel.

in order to compare the properties of polishes A and B. The results of some of these experiments are summarized in Table I. In these tests a 125 gram weight was used on the CS 8 wheels. The panels were prepared by flooding them with a one ml. aliquot of the polish

and allowing them to dry for 24 hours at 75°F. and 50 per cent relative humidity between coats. It should be noted, that it was necessary to brush the wheels of the abrader with a stiff brush during the test in order to obtain good replication of results. It may be seen that these results agree with the trends shown using the isotope test procedure.

The drying period for the Taber Abrader panels is a critical factor, and a period of 24 to 48 hours appears optimum. Apparently when polymer-type finishes are dried on the vinyl panels for one week without traffic they may give misleading results.

One note of caution in the Taber Abrader test should be given. A wax-base polish gives much higher apparent resistance (about 2000 cycles for 50 per cent removal) than a polymer base finish. Thus if wear comparisons are made between markedly different products, the radioactive method must be utilized for even qualitative answers.

Except as mentioned above, these two wear test methods correlate quite well with each other and with field trials. However, while the radioactive method is a primary quantitative test, the Taber Abrader method is a secondary test. It must be compared with an actual radioactive test to enable quantitative conclusions.

Summary

TWO methods of wear testing are presented, with data from comparisons of two similar polymer polishes. The first method, using a short half-life radioactive isotope utilizes a swab technique for sampling and gives quantitative

(Turn to Page 161)

Table 1. Comparison of Polishes A and B by the Taber Abrader Method

Number of Cycles				
Sample A		Sample B		
1 ccat	2 coats	1 coat	2 coats	
275-300	350-400	150	200	
375	700	250	400	
450	900	450	650	
500	1000	500	800	
	275-300 375 450	Sample A 1 coat 2 coats 275.300 350.400 375 700 450 900	Sample A Scamp 1 coat 2 coats 1 coat 275-300 350-400 150 375 700 250 450 900 450	

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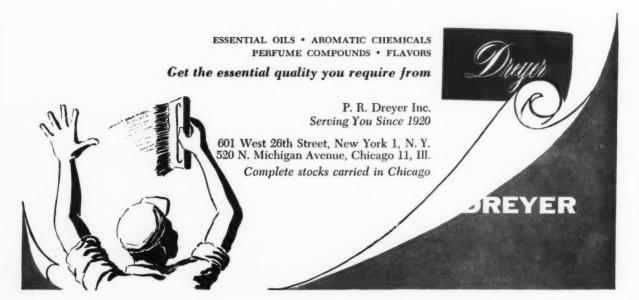
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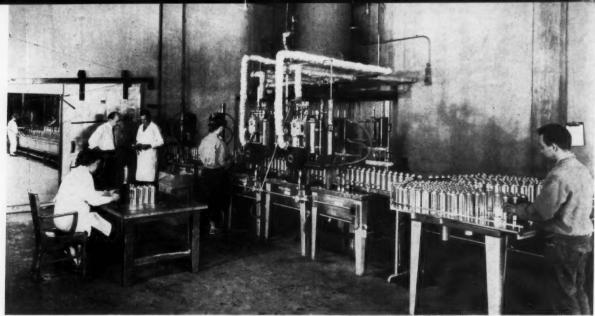
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aerosol containers at speeds of up to 120 cans per minute. Machine may be used for the loading of either bottles or cans.

Coast Aerosol Loader . . .

F, as now seems likely, Los Angeles remains as the pressure packaging center of the West Coast, no small part of the credit for this should be attributed to Western Filling Corp., a young, progressive and fast growing contract loader in the heart of what it considers a "fabulous area."

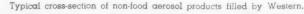
Western Filling came into being in 1953, incorporating in

The story of the first five years of growth and development of Western Filling Corp., Los Angeles contract loader

November under the laws of the State of California. Much thought and planning went into the decision to locate in Los Angeles. Reasons for the choice may be summed up as follows:

- 1. Aerosol technology, facilities and available services were lagging in the Los Angeles area; opportunity for growth appeared favorable.
- 2. The freight situation was favorable and appeared certain to improve. Current propellant and other raw material prices are competitive with Eastern costs in the face of continually rising freight rates. Western reckons it is now possible for marketers to save up to 100 per cent of their freight west, plus paring costs of warehousing and drop shipping, by utilizing its complete facilities.
- Southern California was, and still is. the fastest growing industrial and residential area in the country and represents the number one marketing region on the West Coast.
- 4. Manufacturers of a wide variety of products were, and are, well established in the Los Angeles area. Cosmetic firms, drug and pharmaceutical houses, paint manufacturers, food companies and many other organizations interested in specialty products are located in the Los Angeles area.
- 5. Importing and exporting facilities. ideal for supplying aerosols to all parts of the world, were near at hand.
- 6. An ideal climate prevails in which to enjoy living.

Basic principles of operation





were established as follows:

 Western Filling feels it can succeed best by protecting and advancing the welfare of its customers through the creation of new products for them, improving established ones, and offering a complete service with quality the primary consideration.

2. Western Filling avoids competition with its customers by refusing to mar-

ket products of its own.

Product development is strictly confidential in nature. Western Filling will not reveal any information to anyone about any product unless it is first cleared with the customer.

4. Western Filling acts as a co-ordinator between basic suppliers and the specialty product manufacturer. Much credit rightfully belongs to these suppliers: their services, knowledge, and materials are vital to the success of the manufacturer and hence the custom filler.

Western Filling Corp. started small. Production began in early '54 on a medium speed (40 cpm) cold fill line designed and built by the corporation principals. Although the men involved were "old" so far as aerosols were concerned, there was much to be done

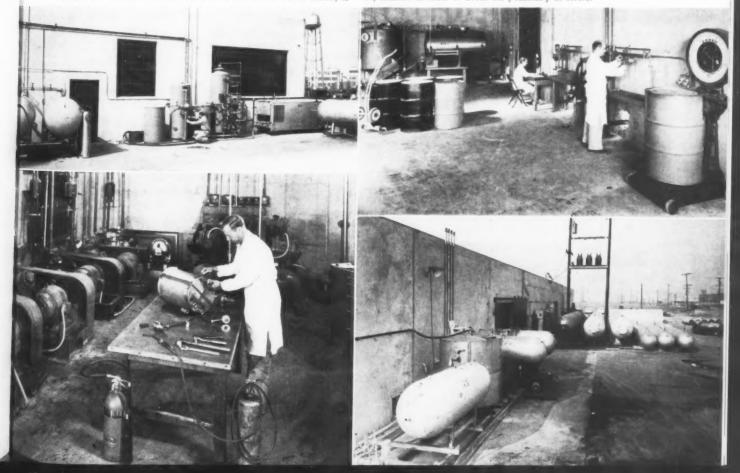
and even more to be learned. Commitments were made to package materials that were not only hazardous, but required specifications so minute and critical that failure to control them accurately to within a few parts per million, or thousandths of an inch, meant complete product failure. The job was done, co-operatively, and so successfully that warranties of a year are regularly made on one product by the marketer while competitors are still soldering their can closures on the same type product to prevent seepage in the field.

From this auspicious beginning, much progress has been made. Additional lines were designed, built and placed in operation as rapidly as possible. In order, they were: (a) a two line automatic pressure filler; (b) a four line automatic cold filler; (c) a single station cylinder filler with a screw-in closure.

Product development moved

at an equally rapid pace resulting in many "firsts" in the pressurized field some of which are listed below. In the industrial products field, the first pressurized engine starting fluid was developed cooperatively by Western Filling and the Wilco Company. Pressurized "Sure Fire" was marketed in 1955 with Western doing the packaging on specially modified equipment for the highly flammable fluid. This product met all shipping requirements without need for special permits. It soon became evident that operating temperatures of -20°F, were not adequate for certain northern regions of the world such as Alaska and Canada. Reformulation was undertaken, and compressed gasses were thoroughly evaluated, in an effort to obtain performance under severe temperature conditions. The reformulated product, shipped under special permits, will operate as low as -65°F., and generally much

Separate pressure propellant blending system (left, foreground, topphoto) utilizes several 600 gallon tanks. Demineralized water, having a purity of less than one part per million, is supplied from zeolitemonobed unit shown in upper right of same photo. Photo bottom left is of compressor room at Western's plant. Pumps, tanks and scales are mounted outside with scale Leam inside where mixing is accomplished by remote control (photo top right). Bulk propellant storage facilities at Western's plant are installed above ground and consist of seven separate systems handling not only common propellant blends but special types as well. Combined storage capacity: over 250,000 pounds. Each system is piped individually to the mixing department in order to avoid the possibility of errors.





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Why? Because our chlorine is sold with a guarantee of satisfaction. We've coddled it every step of the way . . . from basic raw materials to the finished product we deliver to your plant. This rigid control assures its quality.

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lower. This product, along with others, is being successfully used in many colder regions of the world. Also, as a result of this experience shipping regulations are currently being modified, with approval of the Chemical Specialties Manufacturers Assn, to permit shipment of this material when properly tested, packaged, labelled and marked to conform with the necessary requirements.

In co-operation with Ideal Chemical Products, "Metaltone," the first aerosol hammer finish and "Flamemaster #7," a water based fire retardant, later found to possess unusual mothproofing characteristics, were developed. Aircraft primer coatings, spot repellants for upholstered furniture and fabrics, spot removers, refrigerant rechargers, mold release agents, "Propellon," a unique two container sprayer for any liquid type product; these are but a few of the new products Western developed.

Several cosmetic products notably hair sprays, were packaged, with special control techniques employed to insure uniform quality and performance with long unchanging shelf life. "Color Spray"—for temporarily coloring the hair; nail dry for manicurists, shaving creams, cleansing cream, hand lotion, are a part of the story.

In the general household product line, the first successful pressurized foaming glass cleaner was developed co-operatively. "Foaming Clearex," a product of Wilco Co., is a water based detergent type formula and was successfully packed in unlacquered, tin plated containers. This product first appeared on retail shelves in 1955, has been constantly improved, and is enjoying wide acceptance today. It was during this development that Western began working with Calmar Co., to design and manufacture a mechanical actuator for pressurized liquid products. Such an actuator was first developed and used on "Foaming Clearex" and the original starter fluid.

Much data were obtained

and many products were successfully formulated utilizing compressed gases such as nitrogen, carbon dioxide and nitrous oxide, air and other inert gases as propellants. This gave considerable insight into the future of pressurized products. Usage of compressed propellants on a host of new products - most significantly, food type products appeared certain, and led to the formation of the food division of Western Filling which is discussed later on. Other household products such as "House & Garden" insecticides, dog repellents, plant sprays, plastic and upholstery cleaners, suede sprays, butane charcoal lighters, were developed during this period.

New Plant

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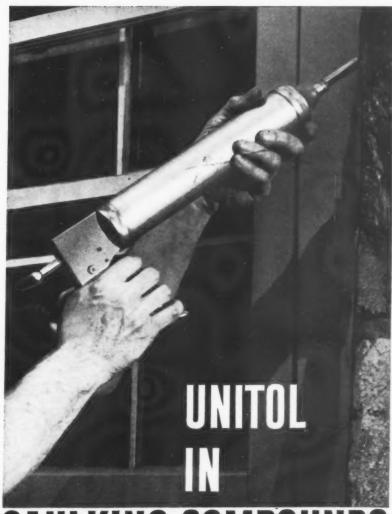
TN early 1956, plans were prepared for a new plant designed specifically for pressurized packaging. The building, of modern design, was constructed of fireproof concrete, and equipment installation began in 1957. The mixing and filling machine area was separated from the rest of the building by concrete walls with double fire doors at the exists. The entire bulding is sprinkled, employing an automatic alarm, with a separate auxiliary hand operated, one ton CO2 extinguishing system for the manufacturing areas.

The warehousing area was specially ventilated, to insure a clean dry atmosphere for storage of metallic component parts and finished products. Egresses for receiving and shipping were located so that material flow in and out would be as convenient and rapid as possible with a minimum of movement and handling. Even lower freight rates are possible with mechanized loading that is available to truckers.

General production facilities are as follows:

Propellant, Chemical Storage

A. The bulk propellant storage facilities, installed above ground, consist of seven separate systems handling not only common



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UNITOL tall oil helps reduce costs in a wide variety of products. In the manufacture of caulking compounds, for example, UNITOL may be used as an economical binder component.

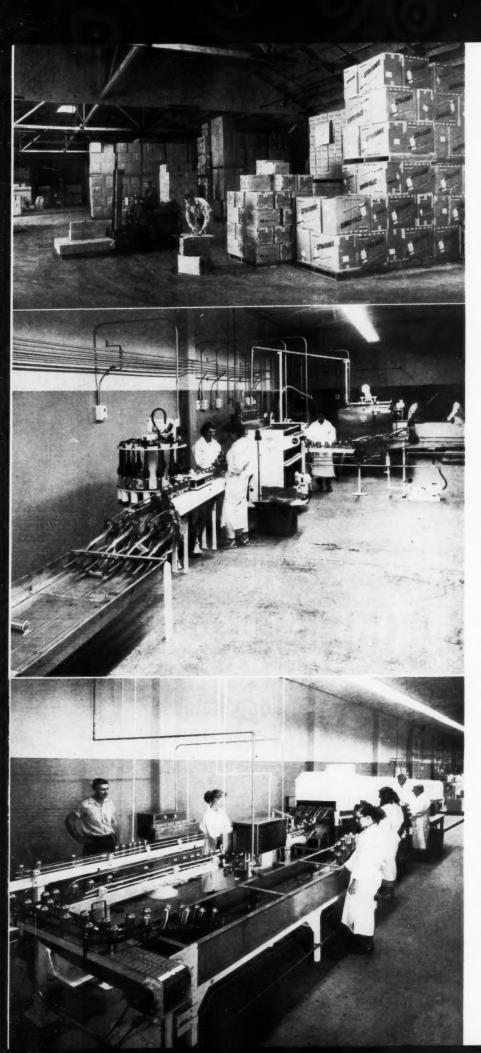
The UNITOL line includes high quality fatty acids, rosin and several acid-refined grades. Perhaps one of them can help save you money. Write for information, samples and prices.



Chemical Sales Division

UNION BAG-CAMP PAPER

CORPORATION 233 Broadway, New York 7, N. Y.



Captions, l. to r., top to bottom

Specially ventilated warehousing area is designed to provide a clean, dry atmosphere for storage of metallic components and finished products.

Special equipment required for pressure packaged foods had to be designed and built to meet stringent specifications. Mixing, blending, and product finishing equipment is complete, even to point of supplying hot or chilled product of controlled temperature to high speed filling equipment. Cans are steem cleaned, filled, vacuum crimped, sterilized, cooled, gassed, tested and completely assembled at 90 cans per minute.

propellant blends, but special types as well. Each system is individually piped into the mix department to avoid the errors that are commonplace with manifolding. The combined storage capacity is in excess of a quarter of a million pounds to assure an adequate supply to the versatile operation.

B. An underground tank farm is utilized for bulk handling of oils, solvents and chemicals, with an additional acre for drum storage to supplement the inside storage area. This system, also, is individually piped to the mix department for rapid, remote control materials handling. The combined capacity exceeds 160,000 pounds of various materials.

Chem. Process Equipment

A. Cosmetic products: Stainless steel blending system utilizes "Shadowgraph" scales for accuracy. Handling of batches up to 6,000 pounds is convenient, rapid and continuous.

B. Household products: Pressurized blending system has 600 gallon tanks mounted on individual print weigh scales. Pumps, tanks and scales are mounted outside with scale beams inside where mixing is accomplished by remote control.

C. Water based products: This requires a larger capacity blending system for batches of up to 10,000 pounds with mixing being done either by weight or by flow meters. Demineralized water, having a purity of better than one part per million, is supplied from a zeolite-monobed unit. Portable 600 gallon pressure tanks are utilized for propellant mixing on



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PRODUCT NEWSLETTER

featuring METHYLENE CHLORIDE

For safe, fast-acting paint removers . . .

METHYLENE CHLORIDE OFFERS NONFLAMMABILITY, POWERFUL SOLVENT ACTION

Methylene chloride offers producers of paint removers a host of desirable features: nonflammability, low vapor toxicity, stability, superior solvent power. Paint removers formulated with methylene chloride are highly effective on a wide variety of finishes, including many of the newer resins.

Nonflammability gives methylene chloride an important safety advantage over other paint-remover solvents. Widely used where flammable paint removers cannot be tolerated, nonflammable paint removers are also excellent insurance against accidents and fire losses in any depainting operation.

Du Pont technical men are available to assist you in determining the best way of using methylene chloride in your paint-remover formulations. And we'll be glad to send you handling and storage data, as well as other technical information on this versatile solvent. Just clip and mail the coupon or drop a line to Du Pont at the address at left, below.



Historic Independence Hall has its face lifted. Methylene-chloride-based paint remover helps renovate this 204-year-old monument—no danger of fire or explosion.

Versatile methylene chloride is used in a wide range of industries

High solvent power and wide solvent action, coupled with safety in use, have led to the growing use of methylene chloride in casting plastics, in low-temperature vapor degreasing, in cold cleaning solvent formulations and in extraction operations.

Mixed with a high-pressure propellent, methylene chloride is used in low-pressure aerosols to give the desired pressure. Here its high solvent power also helps keep the active ingredients of these aerosols completely in solution during storage.

As a further illustration of its versatility, methylene chloride is used as a refrigerant in low-pressure systems using rotary compressors, as a heat-transfer agent where ultra-low temperatures are needed and as a chemical intermediate. For more information on Du Pont methylene chloride and its many uses, clip and mail the coupon at right or write:

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Du Pont METHYLENE CHLORIDE

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PLE	EASE CHECK:	
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	Aerosol Propellents and Solvents	City
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Captions, l. to r., top to bottom

One story concrete building of modern design which Western moved into a year ago.

Final assembly conveyor, at which point filled, labeled cans are cartoned and weighed.

Cans being fed automatically into 45 foot magnetic test tank. Thence they go through driers, accumulators, coder, spray tester and labeler on way to final assembly conveyor.

Laboratory, under direction of Robert C. Webster, manager of the food division, plays an important role at Western Filling.

platform scales. Tanks are handled by large fork lifts.

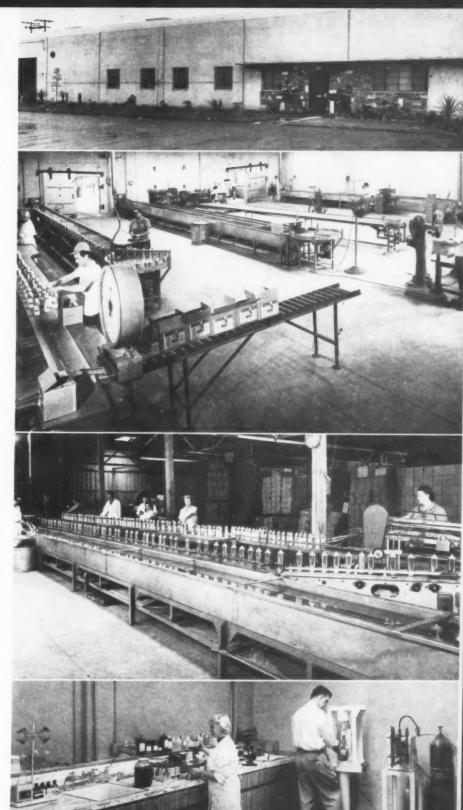
D. Special products: A separate pressure blending system is employed utilizing several 600 gallon tanks.

Production Lines

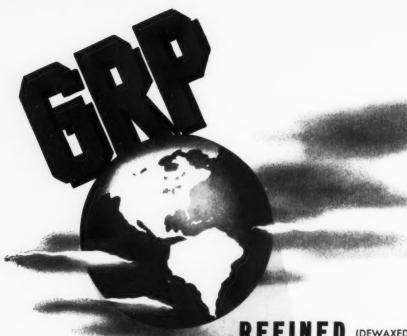
A. Cosmetic products: Twin line, 16 head, single or two stage, explosion proof filling machine, equipped with eight station vacuum pressure can cleaner, is designed for high speed (120 CPM). This machinery may be used for either bottles or cans, with product handling stainless steel throughout. Cans are fed automatically into a 45 foot magnetic test tank, through can driers, accumulators, coder, spray tester and labeller to the final assembly conveyor. After assembly, cartons are weighed and palletized.

B. Household products: The four line, eight head single or two stage explosion proof filler, with can cleaner, produces up to 80 cans per minute. Designed on a volumetric principle, this filling machine operates within a weight variation of less than 0.5 per cent continuously, with little or no adjustment required.

C. Water based products:
This is a twin line, automatic, explosion proof pressure filling machine. Equipped with a cycle interrupting device, this machine is automatically stopped if the required amount of material is not filled into the can. This line was designed and is currently being used for flammable as well as non-flammable propellants in a variety of products.



D. Special products: This twin line, stainless steel, explosion proof electromatic filler is designed for single stage cold filling. Installed along an outside wall, the (Turn to Page 139)



REFINED (DEWAXED) BLEACHED White Shellac

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Because of Uniform Quality — Quick and Complete
Dissolving and Superior Leveling Properties — Long Shelf Life.

Plus High Gloss Tough Scuff Resistance —
Maximum Anti-Slip Qualities

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SHELLAC

World Tallow Picture

(From Page 46)

is an estimated figure for fat-splitting in the footnote of Table 4 of 651,210,000 pounds.

There is one program that should be mentioned here, and that is "The Market Development Project in Japan in 1956," which was conducted by the Department of Agriculture in cooperation with The National Renderers Association. The purpose of this project was to increase U. S. exports of inedible tallow and grease by explaining to processors in Japan new uses for these products, and to iron out existing differences between U.S. trade and Japanese importers with regard to quality standards. This survey was completed by two members of the U.S. rendering industry and a report was filed with the Department of Agriculture.

A follow-up program to promote sales of soap in Japan is now in progress. This project is being conducted through the use of P.L. 480 funds.

In the remaining space I should like to discuss some of the comments included in the reports from some of the countries.

The report from Canada stated that trends in the industry are following the pattern in the United States, with synthetic detergents increasing rapidly in production and sales, displacing soaps, flakes and powders, and thus reducing the demand for tallow and grease for soap making.

Over 50 per cent of the inedible tallow and grease used by Mexican industry has customarily been imported from the United States. Due largely to the growth of the soap industry, imports for 1956 increased by more than 50 per cent over 1955 despite an increase in domestic production. However, the picture changed drastically on March 29, 1957, when the Mexican Government placed a prohibition on the importation of inedible tallow. In July, permits were granted

for the importation of 3,000 metric tons and in October permits were issued for an additional 7,000 metric tons. Since then, no tallow has been allowed to enter. It is anticipated more import permits will be issued in 1958. Although the import prohibition has been rationalized as an attempt to control the use of inedible tallow for human consumption, it is evident that the copra industry was instrumental in influencing the government decision.

In France it appears that no continuing opportunity exists for significant imports of inedible tallow and grease from the United States. Domestic production, based on a forecasted increase in production of livestock, is expected to satisfy domestic demand at least through 1961. Increased French imports in 1957 were stated by the soap makers' trade association to reflect a special licensing program designed to help soap manufacturers meet an extraordinary demand created by the Suez crisis. With the cessation of this emergency, no significant volume of licenses can be expected in the near future.

Western Germany reports that tests made with inedible tallow and grease as substitutes for grains as calory suppliers gave very satisfactory results. Experts expressed some hope that in the long run slaughter fats will be introduced in mixed feeds. For the near future,

The Author, Carroll V. Danielson, is acting director, Food Industries Division, Business and Defense Services Administration, U. S. Department of Commerce, Washington, D. C.



the use of slaughter fats for feeding is improbable because the present calories can be supplied at a cheaper price from corn, and the German Food Law prohibits the application of antioxidants in mixed feeds, which is the only profitable method of preventing rancidity of fats. In case the processing of fats should prove profitable, the German Feed Industry Association plans to request the Federal Ministry for Food, Agriculture, and Forestry to change existing law.

While West German consumption of inedible tallow and grease as a whole remained practically unchanged, distillers' requirements dropped considerably during 1957. This was caused by decreasing exports of fatty acids to the Mediterranean countries as a consequence of the P.L. 480 program. The comparatively stronger price increase for lower grade tallows than for fancy and extra fancy were prohibitive for processing and caused purchasing countries to buy directly higher grade tallow.

Approximately 85 per cent of the soap produced in Italy consists of laundry soap and the balance is toilet soap. Some types of laundry soap are slightly perfumed and used instead of toilet soap by the working classes especially in the rural areas and in Southern Italy. Production of detergent soaps appears to have been discontinued. The sharp increase of imports in 1955, compared with 1954, was primarily due to the adoption of improved techniques in processing inedible tallow by splitting into fatty acids and glycerine, and to the substitution of tallow and grease for costlier palm and coconut oils.

It has been quite a job to assemble this information in such a short time. Our date for the final report containing more detailed information is April 15.

We hope that you have derived a better insight into the world picture of one of your basic raw materials and that when the final report is made available you will feel free to consult with us on any particular aspect of the report.



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U-3050 UBATOL produces a tough, flexible, clear film in wax compounds. There is no compromise with yellowness since U-3050 is used in place of dark colored resins and waxes.

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Complete details on applications and compounding variations are available from UBS Field Representatives.



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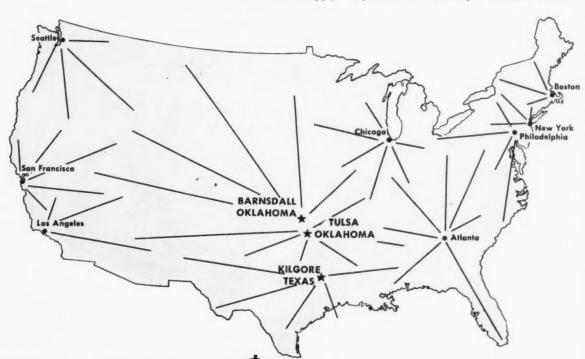
BOTH

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Packaging...

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James R. Andrews, executive vice-president of Ohlo Benboard Co., Simmus, O., was elected president of the Folding Paper Ray Association of America of the 18th consiveracy government hald in New York, lost ments. He succeeds Bornom F. Greenway, vice-president of Continuated from Co. New York, who exceed as president for the past three years.

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OWENS-ILLINOIS ASSURES YOU A COMPLETE PACKAGING APPROACH



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Pure research into fabrication of glass, packaging research into processing and handling methods in customer plants, market research into consumer attitudes. All add up to greater packaging value.



Engineered Design

At Owens-Illinois, your package's three needs are taken into account: 1) Considerations of its function in the retail store, 2) its operating efficiency, and 3) its consumer utility.



The Right Container

Versatility of facilities and talents make O-I your best source of supply. In container development—beauty, utility, tradition are blended in the right proportions for your product's needs.



The Right Closure

Through long and continuing research O-I has developed the most advanced metal and plastic closures. Helping you choose the right closure is another function of O-I's packaging service.



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O-I 'specialists are keenly aware of sales benefits derived from plastic shaker and pour-out fitments which are not "gadgets" but which increase consumer satisfaction with your product.



Merchandising Cartons

Modern cartons are developed only through systematic consideration of their opportunity to serve you in the retail store and warehouse... as well as on your own filling line and in transit.





New convenience for liquid products! New two-finger handle by O-1...makes large-size containers so much easier for the housewife to use.



Laundry products in glass are easy to hold, easy to use...and a glance shows how much is left.

Look at <u>all the freedom</u> glass brings to <u>washday</u> packaging!

In today's market, your laundry product needs every packaging advantage: a new user convenience—an edge in eye appeal—or even the smallest reduction in volume-cost.

That's the beauty of glass packaging—packaging free-dom! There are endless ways to improve your salespackage to make it work harder. Take, for example, these up-to-the-minute packaging ideas from Owens-Illinois.

The full-gallon jug. Ideal for volume items like liquid starch, where users are accustomed to buying for economy in big ½-gallon sizes. Users will appreciate the extra savings they get in the full-gallon jug. And it

means the advantage of more economy to you, too!

New two-finger handle. Gripped with two fingers, instead of one, economy sizes of liquid washday products seem so much lighter, far more convenient to use.

Bright, attractive ACL labels. Natural for premiumpriced washday products like special cold-water compounds for woolens. Glass labeled with bright, colorful ACL label makes an eyecatching salespackage.

So for washday packaging—make it glass! Remember Owens-Illinois is the marketing-minded supplier of the complete salespackage—from over-all design to selection of the right container, closure and fitment.

DURAGLAS CONTAINERS
AN (I) PRODUCT

Owens-Illinois

GENERAL OFFICES . TOLEDO 1, OHIO



"These clinics help create new business for my customers by promoting the aerosol idea among marketers and prospects"

says Glenn A. Piper, Jr., of Du Pont

"We've found seminars are particularly effective in promoting the aerosol idea," says Mr. Piper, salesman for Du Pont's "Freon" Products Division. "The result is a steady flow of new aerosol products and new business for custom fillers in my territory.

"A typical seminar is an all-day session with a marketer's organization. Top management, chemists, advertising and marketing men and others interested in aerosols are invited. Du Pont experts demonstrate aerosol advantages and present marketing data. The group discusses particular technical and marketing problems related to the prospect's line. These seminars contribute valuable information for developing new aerosols and improving old ones. We've held about thirty-five in my district, and they've proved highly successful in promoting interest in aerosols."

Whether you're a loader or a marketer of aerosol products, you can take advantage of the valuable sales-building services which Du Pont offers. In marketing, Du Pont surveys develop information to help you expand sales of your products. In national advertising and promotion, Du Pont works continuously to build markets for aerosols, helping to bring you a steady flow of new customers.

In addition, Du Pont's know-how and experience are available for technical help with aerosol development or production problems. And, in the manufacture of "Freon", Du Pont offers aerosol propellents unsurpassed in quality, performance and properties. Du Pont maintains the industry's fastest propellent delivery schedules from three plants and a country-wide network of warehouses.

If you have a problem in any area of aerosol development, production or marketing, call or write the Du Pont office nearest you. And be sure to buy Freon* for all your propellent needs.

SALES ENGINEER, Glenn A. Piper, Jr., has served the aerosol industry in the Chicago area since 1953. A midwesterner by adoption, he was born in Staten Island, New York. After serving a hitch in the Navy in World War II, Glenn attended Ursinus College, where he received a Bachelor of Science degree in chemistry. In 1951 Glenn joined Du Pont's "Freon" Products Division as a sales trainee, after which he was assigned as a sales engineer for "Freon" in Du Pont's Central District. Since then Glenn has worked closely with aerosol marketers and custom fillers in his area. As a Du Pont salesman, he is able to call on know-how from the whole Du Pont Company, which, added to his own specialized knowledge, makes him especially able to help aerosol marketers and custom fillers with their problems.

E. I. du Pont de Nemours & Co. (Inc.)
"Freon" Products Division 314
Wilmington 98, Delaware

BRANCH OFFICES 40 Worth Street New York 13, N. Y.

7 S. Dearborn Street Chicago 3, Illinois

701 Welch Road Palo Alto, Calif.

FREON® propellents

*Freon and combinations of Freon- or F- with numerals are Du Pont's registered trademarks for its fluorinated hydrocarbon propellents.



BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

Packaging NOTES

Crown Appoints Murray

Francis T. Murray recently has been appointed director of advertising, public relations and sales



Francis T. Murray

promotion for Crown Cork & Seal Co., Baltimore. Previously, Mr. Murray had served as executive director of the Philadelphia Inquirer Charities, Inc.; director of intercollegiate athletics at the University of Pennsylvania; and director of the United States Foreign Operations Administration. He most recently had been engaged as public relations counsellor to industrial realtors.

Turner Changes Name

J. S. Turner White Metal Co., New Brunswick, N. J., third oldest manufacturer of collapsible metal tubes, last month changed its name to Turner Tube Co., according to John E. Turner, Jr., president. The concern was founded 60 years ago at its present location by Mr. Turner's grandfather, John S. Turner.

Acquires Printing Firm

Acquisition of Lord Baltimore Press, Inc., Baltimore, by International Paper Co., New York, through an exchange of stock, was announced last month. Full details of the transaction were not revealed.

According to Richard C. Doane, International president, the

operations of Lord Baltimore would be carried on as in the past with the same operating and management personnel. He added that Hugo Dalsheimer, formerly president and treasurer of Lord Baltimore, would serve as chairman, and Leonard Dalsemer, formerly executive vice-president, has been named president. Mr. Dalsemer also has been appointed a vice-president of International Paper.

Lord Baltimore custom designs and prints consumer packages and labels by lithography and other printing processes. International is one of the largest paper making firms in the world. It makes shipping containers, "Kraft" paper and board, newsprint and book and bond paper.

Collapsible Tube Use Up

Collapsible tube shipments in 1957 established a record high of 1,089,838,656 units, according to figures recently released by the Collapsible Tube Manufacturers Council. The shipments were 5.2 per cent larger than in 1956. Toothpaste accounted for the largest number of tubes, 205,100,784 units, or 53 per cent of the total shipments. Household specialties, industrial products, shaving creams and pharmaceuticals also contributed substantially to the total. More than 13,369 tons of aluminum, lead and tin were used last year in the manufacture of these tubes.

Seek Container Standards

The Packaging Institute is sponsoring ten proposed standards for large steel containers, ranging from five-gallon pails to 55-gallon drums. Purpose of the proposed standardization is to eliminate problems caused by different heights and designs of containers.

These differences in containers of the same capacity, according to the Institute, have caused trouble not only in handling and stacking during shipping, but also in filling containers and storing them, according to the packaging Institute.

Continental Names Johnson

Appointment of Harold Johnson as manager of multiwall bag sales for Continental Can Co., New

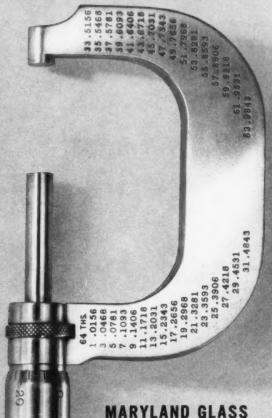


Harold Johnson

York, was announced recently by Dean P. Stout, general manager of the containerboard and Kraft Paper Division. Mr. Johnson will be responsible for manufacturing and sales promotion of the division's new multiwall line, which includes all types of bags for packaging chemical specialty products. Mr. Johnson comes to Continental from Virginia-Carolina Chemical Corp., Richmond, where he was manager of the bag division.

New Continental Can Size

Development of a new 48 ounce metal container, called "Fluid Flow," was announced recently by Continental Can Co., New York. This can size is now being used for packaging "Klear," a new liquid floor finish announced last month by S. C. Johnson & Son, Inc., Racine, Wis. The new package (a photograph which appeared on page 152 of the March issue of Soap and Chemical Specialties) features four-color wrap-around lithography and a lithographed dome. Red, white, blue and black are the colors contrasted in the container's printed design which features the brand name and a sales





MARYLAND GLASS
DESIGNERS USE THE
MICROMETER FOR
PRECISION ACCURACY...

BUT ESSENTIALLY

Package design begins with an idea

Every craftsman knows his tools, but the creative package designer must do more—first he must bring an idea to life. An idea that says Yes to questions like: Is this container distinctive? Will it sell on the shelf? Does it pack properly, ship safely? Our design department specializes in designs that stop the eye . . . start the sale. For an affirmative solution to your design problems, contact Maryland Glass Corp., 2147-53 Wicomico St., Baltimore 30, Md.

PACK TO ATTRACT IN

MARYLAND GLASS

Blue or Flint . Jars and Bottles

message on front, while the back is devoted to the wax's advantages and application instructions. The can's dome is highlighted with a pinwheel pattern of the same colors repeating the copy on the can's front and leaving a designated area for price marking.

The package also provides complete product protection with an enameled lining and a leak-proof sideseam cemented with thermo-plastic cement. A dripless polyethylene nozzle permits an even flow of wax with an exacting cut-off when pouring is stopped, according to the manufacturer.

Vulcan, Ltd. Expands

Vulcan Containers, Ltd., Rexdale, Ont., recently completed a 30,000 square foot addition to its plant in that city. The company, which manufactures steel and metal shipping containers for packaging industrial chemicals, began its Canadian operations in 1953.

Anchor Hocking Sales Up

Anchor Hocking Sales Corp., Lancaster, O., recently reported an increase in sales and earnings during 1957. Net sales totaled \$125,050,522, as compared with \$120,086,088 in 1956. Net income in 1957 amounted to \$6,988,421, equal to share earnings of \$4.73. This compares with \$6,200,677 and \$4.18.

Emhart Names Two

Wade Shorter, Jr., has been named vice-president and John W. Murray, manager of the research, development and engineering division of Emhart Manufacturing Co., Hartford, Conn., it was announced recently. Mr. Shorter is currently general manager of the division. Mr. Murray previously had been assistant manager.

Prior to joining Emhart, Mr. Shorter was a design and development officer in the U.S. Army Ordnance Corp. Mr. Murray was a chief project engineer for Anderson-Nichols & Co., Boston. Emhart produces equipment for glass container manufacture and automatic packaging.

Toothpaste in Tanks for Home Use?

TWENTY-GALLON tank of toothpaste hooked on to the outside of the house and piped in like fuel oil is the latest brainstorm to come out of the current wild marketing scramble in dentifrices. At least, the idea is the brain-child of Doc Quigg, UP writer, who recently did a piece on dentifrices including aerosols and squeeze bottles. He complained that tooth paste is always being changed, that one manufacturer puts out a product mostly because another manufacturer has the same thing. His ideas in part follow:

"Americans are the world's greatest merchandisers, and the constant struggle of industry to repackage and rebuild its product into a new image of worth every 20 minutes is wondrous to behold.

"A recent review in this column on push-button cans and squeeze bottles drew some blithe comment from a big man in tooth-paste about the joys and brain-storms of that valuable business.

"The toothpaste industry is great fun," he said. "Somebody sold that leading medical journal, the Readers Digest, an article on ammonium ion as a great toothsaver. So all of us in the manufacturing business had to rush out an ammonium ion toothpaste whether or not our research showed it did or did not help the teeth.

"Then another writer sold the Saturday Evening Post a piece revealing that chlorophyll really was the priceless ingredient. So we all had to come out with a chlorophyll paste, called 'the greens' in the trade.

"Then the press discovered a little town in Texas where nobody had any cavities. The answer: They had fluorides in the reservoir. So we all bought a little fluoride and stuck it in – the public demanded it. This fad lasted a couple of months.

"Now you can't sell ammonium ion or chlorophyll or fluoride, just as we suspected. This makes it easier for the druggist too because he doesn't have to carry four variations of each brand. But lately there has been a dearth of lay articles on new ingredients to excite the public. Guess the writers have turned their attention to rockets.

"The result was, the consumer having returned to the white toothpastes, things got pretty dull I can tell you. So we thought about packaging . . . some of the boys now are going in for bombs—aerosol cans.

"These are great fun. Give a child a bomb and the little darling can have a great deal of innocent amusement. The best of them will squirt 10 feet. Then you whale the hell out of the brat.

"Confidentially – and don't tell the Blatnik committee about this – we're working on a 20-gallon

Wade Shorter, Jr.



John W. Murray



1st For Custom Packaging STALFORT

Since 1878, one of the leading manufacturing chemists to develop, manufacture, and package under private labels all types of waxes, polishes, and cleaners. Custom packaging of liquids or solids in glass or tin—our formula or yours.

- Liquid and paste wax
- Deodorizers, air purifiers
- Dyes, polishes, cremes

Automatic filling and labeling equipment

Ist I E ROSOLS

Newly expanded facilities, with a complete research and development laboratory, makes Stalfort one of the most modern and best equipped aerosol fillers in the country.

STALFORT PRESSURE-PAK

Plants-Arbutus, Baltimore

- 58,000 sq. ft. modern facilities
- Pressure fill and cold fill
- High speed filling lines
- Multi-stage
 Chillers & bulk storage

★ JOHN C. STALFORT & SONS, INC.

Office-321 W. Pratt St., Baltimore 1, Md.

SOAP and CHEMICAL SPECIALTIES

tank filled with toothpaste. This fits on the outside of the house and a hose runs into the bathroom.

"You simply hold your brush under the hose, turn it on and there you are. Our service wagons deliver the tanks as they are needed. We are also setting up a home service so you can send your teeth in to us and we will clean and return them, painted in stripes or any design you may specify. One day service if you call before 8 a.m." (Let's not forget striped toothpaste. Ed.)

Soaps Win Folding Box Merit Awards

FOLDING cartons used by makers of soaps and related products were given four "merit" awards in the annual contest sponsored by the Folding Paper Box Association of America to honor the "100 Best" folding cartons produced in 1957.

In a category covering "general merchandising superiority" merit awards were given to Newport Soap Co. and to Avon Products, Inc. In the category covering "superiority of printing by multicolor letterpress," Colgate-Palmolive Co. and Procter & Gamble Co. each received a merit award.

The "merit" award won by Newport Soap Co. was for a five-

ent

bar carton holding its "Brocade" complexion soap. Judges commented that this carton is "a fine example of a multi-pack dispenser for high-grade soap." They noted further that it is packaged effectively, meets requirements for automatic filling by machine, is an attractive dispenser carton, feminine and appealing to the housewife.

The box maker, Schmidt Lithograph Co., used the offset printing process in three colors on .018 bleached sulphate stock. William Provan and Gerry Mertens of the Schmidt staff created the design.

The merit award won by

Avon Products was for a four-section carton holding four bars of "Avon" toilet soap. The outstanding feature of this container, said the judges, was the surface design, which makes a complete picture of a fireman when the four sections are properly arranged. The box-maker was the Nevins Co., Clifton, N. J., who used the letterpress printing process in four colors on .016 white machine clay coated news stock.

Procter & Gamble's merit award was given in the "superiority of printing by multi-color letterpress" category for a family of nine "Velvet Blend" shampoo cartons. Judges said this was "an excellent job of printing in six colors and varnish." Printing problems included keeping the circles equal in size to achieve a halo effect, and overprinting while holding solid areas of color. Richardson Taylor-Globe Corp., who made this reverse tuck box, used .020 lacquered silver foil news stock. Donald Deskey was the designer.

Colgate-Palmolive Co.'s king sized "Fab" carton drew the fourth merit award for the soap industry. It, too, was entered in the "superiority of printing by multi-color letterpress" category and judges noted that it was "excellently printed in four colors." In their comment they pointed out that this "Fab" box is automatically filled from a hopper. It is glued initially at the bottom before a measured weight of the product is inserted. After filling it is sealed and cased. Container Corp. of America, who made this C-P box at its Chicago plant, used an .035 white patent coated news stock and the four colors, applied by letterpress, were gloss ink treated.

Over 10,000 folding cartons were entered in this year's competition by some 160 boxmakers, of whom forty succeeded in winning a place among the "100 Best." Announcement of the winners was made March 19 during the 25th annual convention of the Folding Paper Box Association at the Waldorf-Astoria Hotel, New York.

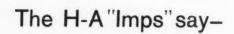
Scap cartons which won merit awards in recent competition of the Folding Paper Box Association included; left to right and top to bottom; "Brocade Scap" of Newport Scap Co.; "Fire Engine Scap" of Avon Products, Inc.; "Velvet Blend" shampoo of Procter and Gamble Co., and king sized "Fab" of Colgate-Palmolive Co.





brings you the newest in glass!







sells cleanliness better



No matter what your product improves, it will get more impulse sales with greater impact—packaged in glass by H-A! H-A's rich, even amber, and crystal-clear flint containers come in every size and shape you need, to please your product and your customer, too. Sell cleanliness in a beautiful package—call or write H-A, right now!

HAZEL-ATLAS GLASS

division of CONTINENTAL © CAN COMPANY

WHEELING, WEST VIRGINIA

SOAP and CHEMICAL SPECIALTIES

A DROP OR A STREAM AT THE TOUCH OF A FINGER!

with Precision's new valve and spout

FOR ANY LIQUID OR SEMI-LIQUID **FOOD PRODUCT**

because ...

THERE IS NO **PRODUCT** DETERIORATION

The hermetic seal is maintained until the product is completely used.

THERE IS NO REFRIGERATION NEEDED

An inert propellant means no oxidation . . . the product stays as packed.



The Perfect Container for ...

PACKAGING DISTRIBUTING

STORING

SELLING











Precision engineers would like to show you how your product can be successfully packaged in a non-aerated pressurized container . . . The one container with built-in sales appeal. The one container with a proven impulse-sales appeal that guarantees big turnover. Inquire today on your business letterhead, there's no obligation, of course.

PRECISION VALVE CORPORATION 700 Nepperhan Avenue



A PACKAGING TEAM NEEDS

To get the best packages for their products, more and more companies are making packaging decisions team decisions. But a packaging team isn't complete unless it has the "outside" viewpoint—the kind of viewpoint you get from an Anchor Man!

The Anchor Man is a glass packaging specialist. He's helped solve hundreds of tough packaging problems, and he can help solve yours through this wide experience.

He offers a complete line of Anchorglass* containers—amber, crystal and green—in all standard sizes and styles. The quality of these containers is safeguarded by hundreds of daily checks, tests and controls. You get the same high quality standards in the complete line of Anchor*



AN ANCHOR MAN!

metal and molded closures. And you get containerclosure combinations that are best for you in every way.

Contact your Anchor Man. We know you'll like his service. We know you'll want him on your team, too. Anchor Hocking Glass Corporation, Lancaster, Ohio. Branch offices in all principal cities.

ANCHOR HOCKING

Glass Containers and Closures



can with CROWN Spra-tainers

For pressurized dessert toppings or brand new ideas in food packaging, such as butter spray . . . seasonings . . . tasty spreads, can with CROWN Spra-tainers—to give your product line a real sales spurt.

Spra-tainers offer the filler and marketer more advantages. Metal guarantees no breakage . . . seamless construction provides high-styling . . . full wrap-around lithography lends beauty and high-fashion. Yet, if style is not a factor in your product merchandising, CROWN offers the conventional fabricated Spra-tainer.

Write for your copy of CROWN's new 3rd edition—"GUIDE TO PRESSURE PACKAGING." Crown Cork & Seal Company, Inc., Can Division, 9364 Ashton Road, Philadelphia 36, Pa.

whatever you can . . . call on



CROWN CORK & SEAL COMPANY, INC.
MANUFACTURERS OF CLOSURES, CONTAINERS AND MACHINERY



What's New?

New antiseptic hand soap containing "Actamer," a germicidal compound by Monsanto Chemical Co., St. Louis, was introduced recently by Turco Products, Inc., Los Angeles. Called "Handisan," the product is designed to remove dirt, grease and grime from the hands and is said not to cake in dispensers nor clog sinks or drains. Repeated daily usage for a period of more than seven consecutive days is claimed to reduce skin bacteria by 97 per cent.



"Bleach Tabs," said to be the first liquid household bleach in tablet form, was introduced recently by Barcolene Co., Boston. Each carton of "Bleach Tabs" contains 12 tablets, each individually wrapped in an air-tight plastic packet. Use instructions call for one tablet for a full washing machine load of clothes. The maker claims the product is harmless to fabrics and laundering equipment.

New aerosol insecticide by Amsco Solvents & Chemical Co., Cincinnati, is packaged in a 16-ounce aerosol container by Crown Can Division of Crown Cork & Seal Co., Philadelphia. Tradenamed "Hot Shot," the product is designed to control flies, mosquitoes, anats, wasps, flying moths, water bugs, roaches, ants, silver fish, carpet beetles, fleas and bedbugs. Crown's 16-ounce aerosol container comes with either staked valve opening or one-inch opening. It features a drawn top which may be lacquered, coated or imprinted.















New furniture polish by Nylwax Corp., Worcester, Mass., contains nylon resins and silicone oil by Union Carbide Corp., New York. Called "Nylwax," the product is designed for application on all types of furniture. It is applied directly to the wood with a soft cloth and is claimed to provide a dust-free gloss. Eight-ounce bottle retails for \$1.25.

"Gril-Lite," new spray-type charcoal lighter in pressure package, was announced recently by Renuzit Home Products Co., Philadelphia. Designed for quick-starting of charcoal and wood fires, the product is packaged in 16-counce Continental can by Sun-Lac, Inc., Newark, N. J., contract loader. "Gril-Lite" is supplied with a Precision valve, has four-color paper label and bears seal of Good Housekeeping magazine.

"Beads-O'-Bleach,' heavy-duty dry chlorine bleach, introduced on West Coast last fall, is now set for national distribution is new foil wrap package. Made by Purex Corp., South Gate, Calif., the product is claimed to be harmless to fabrics, regardless of the amount used or time of immersion. "Beads-O'-Bleach" is packaged in 18 and 33-ounce cartons, which are wrapped in a lustrous yellow metallic foil, which serves as a background for dark blue and red lettering. The front of the carton features the company trademark, with white letters on a red octagon, outlined in blue and silver. Cartons have "press back" tab for laundry use on side panel, with marked holes to punch on other panel, tor kitchen and bathroom use. Foil wrap is by Reynolds Metals Co., Louisville, Ky.

Newly-designed lithographed rive-gallon containers were announced recently by Simoniz Co., Chicago, for packaging its line of heavy-duty waxes. The new cans feature a label with a bold stylized "S" incorporating the product name and descriptive copy on the bottom. The label also includes the "Simoniz Professional Quality Seal." In addition, the new unit is equipped with a polyethylene tamper-proof pour spout.

Newest entrant into the aerosol dentifrice market is "Dr. West's," by Weco Products Co., Chicago. The can, a Crown "Spra-tainer," is claimed to provide about three times as many brushings as a large-size tube. Filling is by Connecticut Chemical Research Corp., Bridgeport, and retail price is 79 cents. The new package features a plastic tip which may be inserted in the nozzle to make the container safe when packed in suitcases or traveling kits. One of the few aerosol toothpastes to be marketed on a national basis, "Dr. West's," introduction will be backed by heavy advertising in consumer magazines and Sunday supplements. Merchandising materials available to dealers include window streamers and counter displays.

"Puro Pool," a new water purification powder, by Living Products Co., New York, packaged in an eight-ounce polyethylene bottle by Plax Corp., Hartford, Conn., retails for \$1.98. Product is said to dissolve quickly and provide protection against algae and athlete's foot and act as a deodorizer. A four-ounce polyethylene bottle by Wheaton Plastics Co., Mays Landing, N. J., retails for 98 cents. "Puro Pool" also comes in a giant-size three-pound metal container, which sells for \$3.98.

Two new colors, antique ivory and pastel yellow, have been added by Krylon, Inc., Norristown, Pa., to its line of "Krylon" spray enamels. The new colors are available only in the 16-ounce size aerosol container. They will retail at \$1.79 and be marketed through hardware, art, variety, department and automotive supply stores.

New aerosol polish for waxing furniture and other hard surfaces such as "Formica," porcelain, brass, stainless steel, chrome, plastic wall tile and marble, was announced recently by S. C. Johnson & Son, Inc., Racine, Wis. Called "Pledge," the product is sprayed either directly on the surface or onto a dust cloth, and then wiped off. No drying time or second wipe-off is required, according to the manufacturer. "Pledge" comes in a six ounce aerosol container, which retails at 89 cents, and a 14-ounce aerosol, which sells for \$1.55. Package is lithographed in tan, gold and brown. Introduction of product will be backed by heavy television advertising.

Lucien LeLong, New York, has introduced three new perfume fragrances—"Balalatka" "Tailspin" and "Orgueil"—in its "Star Purse Mist," Jeweled aerosol dispenser. Package by Wheaton Plastics Co., Mays Landing, N. J., is small enough to be carried in an evening bag. Container is fitted with a metering valve by Risdon Manufacturing Co., Naugatuck, Conn., and is filled by Associated Brands, Inc., Brooklyn, N. Y. Retail price is \$10.

An aerosol odorant for dresser drawers, closets and rooms has been added recently to the line of Renuzit Home Products Co., Philadelphia, Tradenamed Renuzit's "Lavender Spray," the product is loaded by Sun-Lac, Inc., Newark, N. J., in a six ounce Continental Can, and is fitted with a Precision valve and plastic cap.

New concentrate car wash that is claimed to both wash and protect the finish was introduced recently by Swaco Products Corp., Hollis, N. Y. Called "2-Step," the product is applied in the ratio of two capfuls to a half pail of water. "2-Step" is packaged in a 12-ounce can and retails for \$1,49.

New aerosol typewriter cleaner, which also may be used on adding machines, mimeograph units, numbering machines and cash registers, was announced recently by Camie Co., St. Louis. Called "Camie," the product is claimed to remove adhesive tape, solder flux and, in addition, may be used in cleaning still and motion picture film. Five-ounce Crown "Spra-lainer" aerosol can retails for \$1.29.













RISDON VALVE QUALITY IS VITAL INSURANCE

The payoff point for all the time and money invested in your aerosol product is at the fingertips of the user. That is where repeat sales are made or lost.

When your customer pushes the actuator, the performance-insuring quality of a Risdon valve becomes vital. And nothing less than Risdon quality gives full assurance of customer-pleasing results over the entire life of the package. An inferior valve can turn out to be your most expensive "bargain".

Risdon quality...performance-proven on many millions of packages...is the result of extensive scientific research and development. It is zealously guarded at every stage of valve manufacture by Risdon's uncompromising quality control.

Most *leading* aerosol packagers keep their success secure by using only Risdon valves to dispense their products.

Contact Risdon for specific information on the valve for your product.

Write For Free Booklets On RISDON Valves

FOR Pressurized Products Packaged in Glass, Metal or Plastic Containers,

DISPENSING Conventional Aerosols, 3-Phase Products, Alcohol Base Products, Water-Base Products, Foam Products, Powder Sprays, Metered Sprays, Ultra-Low Pressure Applications, Products Containing Propellent Emulsions or Dispersions, etc.



THE RISDON MANUFACTURING CO

Naugatuck Conn



SHAVING CREAMS work up a sales lather in aerosol cans by CONTINENTAL

Solid success story: in three short years, aerosol shaves have hit the top of the shaving cream market (50 million cans in 1956 alone!) It was Continental, remember, who developed the low pressure aerosol can that started this phenomenal market on its runaway path. For your shaving cream, you can't do better than a Continental aerosol, superbly lithographed by Continental experts. Precision-made Continental aerosols are most economically priced. Take your pick from eight sizes and many different styles. You get fast delivery of all the aerosols you need from Continental's greatly expanded production facilities. Research and engineering services are available, plus introductions to valve suppliers and commercial fillers. For aerosols with solid sales power, call Continental today.

CONTINENTAL (C) CAN COMPANY

Eastern Division: 100 East 42nd Street, New York 17
Central Division: 135 South La Salle Street, Chicago 3

Pacific Division: Russ Building, San Francisco 4
Canadian Division: 5595 Pare Street, Montreal, Que.

CONTINENTAL MAKES AEROSOLS FOR EVERY USE...IN THE WIDEST RANGE OF SIZES



PAINT



INSECTICIDE



SPRAY BANDAGES



FRAGRANCE



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ANTISEPTIC

We have the answer to your packaging problem



Are you looking for a central location for packaging and distributing your products locally and nationally? Are you thinking about having your product tested for aerosol packaging?

We package liquids in cans, glass, or plastic containers—either by pressure or refrigeration methods.

As propellants in our aerosol lines, we use halocarbons (Propellants 11, 12, 114) or hydrocarbons (butane, propane), or combinations of both. We also handle liquid filling, small package or bulk.

All filling is done according to your specifications, or we'll be glad to handle the testing and make a recommendation. Efficient production on all lines keeps supplies of your product ahead of demand, and our warehousing facilities make it possible for us to *drop ship*. Write, wire, or phone us for details about our complete filling services.





NEW Erade Marks

THE following trade marks were published in recent issues of the Official Gazette of the U.S. Patent Office in compliance with section 12 (a) of the Trade Mark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. See rules 20.1 to 20.5. As provided by section 31 of the Act, a fee of \$25 must accompany each notice of opposition.

Vapyr-X—This for fire extinguisher. Filed Aug. 8, 1957 by Superior Products, Inc., Kansas City, Mo. Claims use since Dec. 28, 1956.
Poly-Sheen—This for all-purpose floor finish. Filed Mar. 21, 1957 by U. S. Polychemical Corp., Newburgh, N. Y. Claims use since Sept. 1, 1956. 1, 1956.

Sealite—This for floor sealer and finisher. Filed Oct. 16, 1957 by

and finisher. Filed Oct. 16, 1957 by Fischer-Lang & Co., Frederick, Md. Claims use since Dec. 5, 1956. Saspin's—This for liquid rug and upholstery cleaner. Filed Jan. 18, 1956 by Saspin Chemicals, Inc., Chi-cago. Claims use since Dec. 15, 1950. Charg-Aid—This for paint and grease remover. Filed Feb. 21, 1957

by Eaton Chemical and Dyestuff Co., Detroit. Claims use since Oct. 23, 1956.

Jet—This for glass cleaner. Filed Mar. 15, 1957 by Airosol Co., Neodesha, Kans. Claims use since Feb. 18, 1957.

18, 1957.

Condusol—This for dry cleaning detergent. Filed Aug. 20, 1957 by R. R. Street & Co., Chicago. Claims use since June 12, 1957.

Betasol—This for surface active agent. Filed Dec. 18, 1957 by American Cyanamid Co., New York. Claims use since November, 1934.

Synthrowite—This for bleach.

Synthrowite—This for bleach. Filed Apr. 8, 1957 by Organic Chemical Corp., East Providence, R. I. Claims

use since October, 1954.

Delnav—This for pesticide. Filed July 18, 1957 by Hercules Powder
Co., Wilmington, Del. Claims use since

June 10, 1957.

H-I-S—This for laundry starch.
Filed Aug. 9, 1957 by Hercules Powder
Co., Wilmington, Del. Claims use since Sept. 22, 1956.

Ivory—This sudsing cleaner, cleanser and detergent. Filed Aug. 26, 1957 by Procter & Gamble Co., Cincinnati. Claims use since 1879.

Blanchard—This for shampoo. Filed Sept. 12, 1957 by Parfums Blan-chard, New York. Claims use since

Barber's Secret—This for sham-poo. Filed Aug. 30, 1957 by Fulenwider Manufacturing & Distributing Co.,

West Palm Beach, Fla. Claims use since May 2, 1957.

Sprayway This for glass cleaner. Filed July 27, 1957 by Tru-Pine Co., Chicago. Claims use since 1949.

His and Her — This for cake soap and shampoo. Filed June 27, 1957 by The House of Men, Inc., Chicago. Claims use since Sept. 23, 1955.

Alco—This for surface active agents. Filed Mar. 20, 1957 by Alco Oil and Chemical Corp., Philadelphia. Claims use since 1936.

Curb — This for insecticide. Filed Apr. 22, 1957 by Diamond Black Leaf Co., Cleveland. Claims use since Apr. 22, 1957. This for cake His and Her -

Record Folding Box Sales

Sales of the folding carton industry rose to a record high of \$921,000,000 in 1957, according to Norman Greenway, president of the Folding Paper Box Association. Mr. Greenway, who spoke last month at FPBA's 25th annual convention held at the Waldorf-Astoria Hotel, New York, said that although sales were up 3.6 per cent from 1956, profits showed a slight decline because of higher costs. He added that the industry would have to increase its sales and production efficiency to offset these costs.

New combination capper for aerosols



Capping Bottles

Specifications for drill press capper:

12" x 24" x 30"

1/4-HP, 110-V, AC Motor



Capping Cans

New combination drill press capper for capping either aerosol bottles or cans. Compact unit ideally suited for small run and laboratory use. Bottle capping unit crimps valve edge down over outside of bottle. Can capping device creates ridge inside the cap larger than can opening to prevent valve from blowing off under pressure. Both units can be purchased separately or as a unit. Drill press may be used as such when units are not attached.

For further details, write or call

BUILDERS SHEET METAL WORKS, INC.

108 Wooster Street

Call: William Scheck - CAnal 6-5390

New York 12, N. Y.

Other items: aerosol pressure filler; snap-on screw cap for aerosol containers; propellant metering filler; aerosol pressure tester; constant temperature water baths and corrosion baths; stainless funnels, liquid measures, sinks, tanks, base cabinets, etc.



PRESSURE PACKAGING

Doctors Warn on Aerosol Hair Sprays

A WARNING that polyvinylpyrrolidone (PVP) and other high polymers commonly present in aerosol hair sprays may not be altogether harmless is contained in an article appearing in the March 6 issue of the highly regarded New England Journal of Medicine, (pp. 471-6), 8 Fenway, Boston 15, Mass.

In the article, lung damage found in two young women is attributed to aerosol hair sprays which they used several times a day. The authors, Martin Bergmann, M.D., Jerome Flance, M.D., and Herman T. Blumenthal, M.D., all of St. Louis, support their thesis by citing previous work reporting the hazards of parenteral administration of PVP, dextran, CMC, and other polymeric substances and results of extensive animal experiments.

Lesions were found in the lungs of the two young women, who earlier had undergone X-ray examinations which were found negative, when first taken and when reviewed by the authors. Neither of them showed any respiratory signs or symptoms and in both the discovery of what at first seemed to be a serious and widespread infiltrative process of the lungs caused "considerable consternation." The only inhalant to which the patients had been exposed was hair spray. Both patients improved several months after exposure to hair spray had been discentinued.

X-ray photographs of both chests suggested that inhalation of a noxious agents might be the cause of the changes. In one woman lymph glands taken from the neck were microscopically examined and a foreign body granuloma was diagnosed. However, the exact nature of the particulate matter present in the lesion could not be determined.

The literature was examined to establish whether the usual ingredients of hair sprays could cause a granuloma such as found in the lymph gland of one patient and assumed to have been present in the other woman.

The only ingredients of hair spray that need be considered as capable of granuloma formation are the resinous materials and lanolin. Lanolin could conceivably cause lipoid pneumonia, but the histologic appearance would have differed from that found in the first case. The resins consist of mixtures of macromolecules that may vary in size from less than 10,000 to over 1,000,000 in molecular weight. Among the resins investigated the vinyl derivatives, and especially polyvinyl pyrrolidone are important from the point of view of hair spray formulation. Because of their

Introductory marketing of "Gleem" toothpaste of Procter & Gamb'e Co., got under way recently in the Easton, Pa.—Phillipsburg, N. J. area. Product in Crown "Spratainer" retails for 98 cents. Valve is by Precision and G. Barr & Co. loads it.



chemical inertness they cannot be metabolized by the body. Comparatively small molecules, probably up to 10,000 to 20,000 mols, are slowly excreted in the urine. But the kidney is impermeable for particles of over 60,000 to 70,000 molecular weights. Some time after parenteral ingestion they appear in the cells of the liver, spleen, lung, bone marrow and lymph glands. In these locations the presence of resin incites an inflammatory or granulomatous reaction. These phenomena have been shown to occur after intravenous injection of CMC and PVP. The cells where such lesions occurred include Kupffer type cells and others which are regarded as part of the human body's defense equipment against cancer and possibly against arterio sclerosis. Whether the polymers deposited in the lungs after hair spray inhalation are later stored in the liver has yet to be determined.

Animal experiments show that polyvinylpyrrolidone, parenterally introduced into rats and mice can cause a variety of malignant lesions. Since a latent period of 15 to 30 years may have to elapse before tumors may develop in humans, the application of these findings remains to be determined in the future.

Nevertheless the following warning is sounded by the authors: "It seems to be wise, therefore to exercise due caution in the parenteral ingestion into the human organism and in its topical application on the skin and on the mucous membranes of the respiratory and alimentary tracts. . . . This warning applies to both medicinal and cosmetic preparations." This is a quotation from W. C. Hueper, who has done extensive work on tumor formation in rats and mice after parenteral introduction of PVP and on the effect of polyvinyl alcohol on the arteries of dogs. The thesis is extensively documented with animal experiments.

In summation it appears that PVP inhaled from hair sprays can cause granuloma and inflammatory reactions. (The X-rays of

the two women's chests resemble those of tuberculosis patients or sufferers of Boeck's sarcoid.) However, in both cases reported here the changes were reversible. PVP ingested through inhalation is

stored in the cells of the lungs; it may possibly find its way into other vital organs and into cells which are assumed to be vital to our resistance against cancer and other degenerative changes.

Chart form of Interstate Commerce Commission regulations pertaining to aerosols compiled and announced recently by Pennsalt Chemicals Corp., Philadelphia. Prepared in cooperation with H. A. Campbell of the Bureau of Explosives, the chart covers revisions through October, 1957. Available from Pennsalt at 3 Penn Center.

ICC REGULATIONS* PERTAINING TO AEROSOLS

CHART A - AEROSOLS AS DEFINED IN PARAGRAPHS 73.115 and 73.300 (a) (b) 2, 3, 4 Containers not exceeding two inches outside diameter and of not more than four fluid Metal containers of not more than one quart or other containers not more than nces capacity. 73,302 (a) 1 one pint (16 oz) 73.1 III (a) (b) Dispensing Pressures

				must not completely fill the container of fill 3
Packaging a. laner b. Outer	None None	Menal 73,118 (a) Other 73,118 (b) Strong outside conteiners 73,118 (o) (b)	Metal	Specification metal 2P containers
Labeling Required	No labeling required or requirements for each	under ICC Regulations; however, other regulations of aerosol.	latory agencies must	be checked to determine their label
Marking Required	None	Name of contents on outside container is required for shipments via carrier by water	Name of contents on outside container is required for shipments via carrier by water	
Tanta Barriand	1			

The data in these tables are based on I.C.C. Regulations pertaining to Aerosals found in H. A. Campbell's Tariff \$10 (effective 6/19:57) and are believed to represent a correct interpretation of these Regulations.

However, we made no warronty, not is any to be implicitly, with respect to the completeness or accuracy of these data or with respect to the correctness of our interpretation of these Regulations.

our interpretation of these Regulations.

Revision Ucrosser Programment, Permisalt Chemicals Corporation
Previously compiled and copyrighted by David S. Tillotson and John Haslip, January 1957.

Type of Container and maximum capacity	Containers not exceeding two inches outside diameter and not of more than four fluid ounces capacity 73,302a (1)	Metal, Glass, Plastic, etc. containers - no size limitations	Metal containers up to 32 cu. in. (17.73 az) 73,302 (a) 3	2P specification metal containers 73,302 (a) 3 78,33	2P specification metal container with safety device 73.306 (b) 1 78.33
Dispensing Pressures	No limitation	Less than 25 psig at 70°F, and 89 psig at 130°F, - Such aerosol materials are not covered by ICC Regulations	Over 25 psig at 70°F, up to 40 psig at~ 70°F.	Over 40 psig at 70°F, up to 80 psig at 70°F.	Over 60 psig at 70°F. up to 70°F. gat 70°F.
Specific Limitations	None	None	Liquid content of the material and gas must not com- pletely fill the con- tainer at 130°F. 73.302 (a)	Liquid content of the material and gas must not com- pletely fill the con- tainer at 130°F, 73,302 (a)	Must have safety device (such as fusible plug in con- tainer) approved by Bureau all Explosives 73,306 (8) 1
Packaging a. Inner b. Outer	None	None	Non-refillable metal container 73,302 (a) 3	2P specification metal containers	2P specification metal container with safety device Strong wooden or fiber boxes designed to protect valves
Labeling	No labeling required under ICC Regulations; however, other regulatory agencies must be checked to determine their label requirements for each type of aerosal.				
Marking	Nane require d	None required	Name of contents on outside container is required for shipment via carrier by water 73,302 (a)	Name of contents on outside container is required for shipment via carrier by water	Name of contents plus "Inside containers comply with prescribed specifications" 73,306 (b) 1

CHART C - NON-FLAM	MABLE AND NON-POISONOUS AERO	SOLS (EXCEPTIONS TO OTHER PRESSU	stortion, or other defect. IRE CATAGOR(ES)		
Type of Container and Maximum Copacity	Metal Container up to 31.83 cu. in. (17.6 az) capacity 73.302 (a) 7	Metal can - No size limitation specific 73.302 (a) 5	Metal container up to 31.83 cu. in. (17.6 az) capacity 73.302 (a) 9		
Container content	Fiological products or medical preparation which will be deteriorated by heat and compressed gas or gases	Foodstuffs or soaps in metal cans with soluble or emulsified compressed gas	Non-liquified compressed gases afus non- paisonous and non-flammable contents.		
Dispensing Pressure	Not over 43 psig at 70°F. 73.302 (e) 7	Not over 100 psig at 70°F, or 135 psig at 130°F, 73,302 (a) 5	Not over 90 psig at 70°F, or 125 psig at 130°F, 73,302 (a) 9		
Specific Limitations	Liquid content of the product and gas must not completely fill the container at 130°F. 73,302 (e) 7	Container must withstand a pressure of two times the pressure of contents at 70°F, or one and one half times the pressure of the contents at 130°F, whichever is the greater, 73,302 (a) 5	times the pressure of the contents at 70°F, or one and one half times the pressure of the contents at 130°F, whichever is the greater		
Packaging 5. Inner b. Cuter	Non-refillable metal containers Not specified	Metal cans Not specified	2P specification metal cans 70.33 Not specified		
Labeling	No labeling required under ICC Regulations; however, other regulatory agencies must be checked to determine their label requirements for each type of aerosal				
franking	No marking required except the naming of contents on outer container for shipment via water. 73,302				
Testing One completed container out of each lot of 500 or less, filled for shapment, must have been feeded until contents tresched a minimum of 130°F, without a vidence of lankage, distortion, or other defect 73.300 (of 7		None required	None required		

Frankfurt Aerosol Meeting

A charter convention will be held April 15 by the Aerosol Trade Association (Interessen-Gemeinschaft Aerosole) headquartered in Frankfurt, Germany. The meeting is being convened by F. H. Hans, manager of the provisional organization. Mr. Hans is representative of Pegasus International Corp., New York, in Germany, Holland, Austria, and Switzerland. His headquarters which serves as temporary business office for the aerosol group is at Zeil 81, Frankfurt am Main.

At a preliminary meeting reported in Soap and Chemical Specialties, Jan. 1958, p. 125, the group set its objectives which are briefly: solution of technical problems; thorough information service particularly on American developments; monthly news letter (first edition to be distributed at charter convention); representation of common interests of members (includes membership in C.S.M.A., in the newly founded LA.A. in Switzerland, etc.).

Mailing Aerosols

Mailing of pressurized packages is governed by rules set down in the "Postal Manual," chapter 1. sections 125.1, 125.2, and 125.6, according to a recent bulletin issued by the Chemical Specialties Manufacturers Association. In addition the Post Office Department says "that the quantity must be restricted to that amount which can be packaged for safe transmission in the mails."

New stainless steel aerosol container for dispensing internal medication, was designed by Riker Laboratories, Los Angeles, and produced by Tubing Seal Corp., Inc., San Gabriel, Calif. Almost one million of the new containers have already been made, with 10,000 coming off the production line daily.



New Type Aerosol

A new type stainless steel aerosol container for dispensing internal medication was introduced recently by Tubing Seal Cap, Inc., San Gabriel, Calif. The unit, which was designed by Riker Laboratories of Los Angeles, is 13/16 inches in diameter and 21/2 inches long. The valve stem is also made of stainless steel. Called the "Medihaler," the new container is presently being used for packaging three medical preparations for treatment of asthma and bronchospasm. Other drug preparations are now being studied for possible use in the new package. Allegheny Ludlum Steel Corp., Pittsburgh, served as consultants during the initial production stages. At the present time, almost one million of the new aerosols have been manufactured by Tubing Seal Cap, with more than 10,000 coming off the production line

Speaks on Aerosols

A discussion of aerosol technology by Morris J. Root, technical director of G. Barr and Co., Chicago custom aerosol loader, was the feature of a lecture held Mar. 24 at the Downtown Center of the University of Chicago. Mr. Root's topic was "What Non-Technical Personnel in the Cosmetics Industry Should Know About Aerosol Technology."

Mr. Root outlined the evolution of pressure packaging, point-



New aerosol equipment, recently installed in the aerosol testing laboratory of Dodge & Olcott, Inc., New York, is designed for testing flavoring compounds in the filling of food products, Nitrogen, nitrous oxide and carbon dioxide and combinations of such gases will be used as propellants in the experiments.

ing out how aerosol research and development have opened up important new markets in the cosmetics field. He also demonstrated how aerosol technology has made possible the new nitrogen-propelled aerosols.

The lecture was one in a series on cosmetic technology being offered by the university in cooperation with the Chicago Chapter of the Society of Cosmetic Chemists.

Pennsalt Expands Ky. Plant

A multi-million dollar expansion of the Calvert City, Ky., hydrofluoric acid facilities of Pennsalt Chemicals Corp., Philadelphia, was begun recently, according to William P. Drake, president. The addition to the Calvert City unit is expected to be completed by July of this year. According to Mr. Drake, the expansion of hydrofluoric acid production facilities were necessitated partly by increased sales of the company's line of "Isotron" aerosol propellants.

D&O Tests Aerosol Flavors

New aerosol equipment for testing flavoring compounds in pressure filling of food products was installed recently in the aerosol testing laboratory of Dodge & Olcott, Inc., New York. Products to AEROSOL



PACKAGING

can start sales rocketing for you!

And here's how General Chemical can help you get your new aerosol ideas off the ground.

You've seen many aerosol products "take off" on a sales curve that shoots straight up. You've seen total aerosol sales increase over 30% per year since 1951 . . . to 320 million units in 1956. Perhaps you'd like to know more about the aerosol market and its potential. As a leading supplier of aerosol propellants-the "Genetrons"-General Chemical will be glad to provide extensive market information . . . and help you in other ways as well.

For example-if you are interested in marketing a new aerosol, General Chemical can tell you about promising new aerosol formulations developed in our laboratories . . . and can assist in the development of your own new aerosol formulation.

You may want to know about contract fillers and how they work. General Chemical can tell you about reliable contract fillers in all parts of the country who are equipped to handle production of test market and commercial quantities-relieving you of any need to invest in special equipment or personnel.

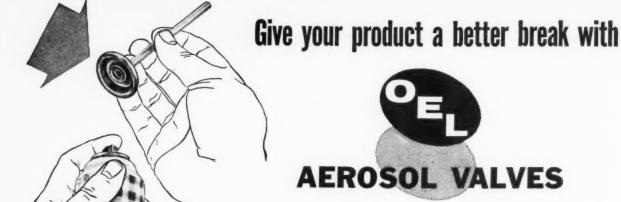
Interested? Call or write "Genetron" Department, General Chemical Division, Allied Chemical & Dye Corporation, 40 Rector Street, New York 6, N. Y.

genetron aerosol propellants



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Functionally as well as esthetically, OEL Aerosol Valves are highly qualified to increase customer goodwill for the products they dispense. This happy result is attained by ingenious design, efficient manufacturing, and careful final inspection. Consider these important points:

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The OEL Valve is now adaptable for products pressurized with nitrogen.

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100 AEROSOL VALVES PER MINUTE
WITH THE CAPEM H-O-FV

If applying aerosol valves is a bottleneck in your packaging operation, here is your solution—the CAPEM H-O-FV.

Rich Products Corp., Buffalo, N. Y., manufacturers and distributors of Rich's "Whip Topping", recently installed one of these machines. Production has increased and results have been most satisfactory since installing the H-O-FV on their aerosol container line.

The Model H-O-FV sorts and applies aerosol valves to whipped cream containers at speeds in excess of 100 per minute. Stainless steel and chrome-plated parts are used whenever necessary to comply with dairy industry regulations. Electric switch gear is mounted conveniently above conveyor to facilitate washing the line at shut-down time.

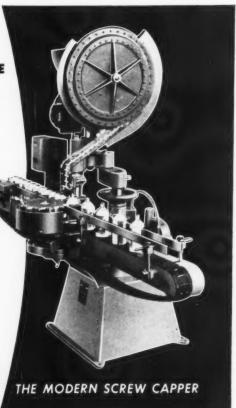
Changeover from one container size to another is simple and easy.

For complete information on the CAPEM H-O-FV and other Consolidated packaging machinery, write Sales Manager, Consolidated Packaging Machinery Corp., 1400 West Avenue, Buffalo 13, N. Y.

E . THE BETTER AEROSOL VALVE

WRITE OR TELEPHONE FOR

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be tested include cake frosting and icing, ice cream mixes, shortening, catsup, syrups and salad dressings. Nitrogen, nitrous oxide, carbon dioxide and combinations of such gases will be used as propellants in the experiments.

Adds Nitrogen Line

Old Empire, Inc., Newark, N. J., contract packaging and custom aerosol loading firm, recently announced the installation of an automatic nitrogen filling line at its plant in that city. The new unit will be used for packaging toothpastes, pharmaceutical ointments, cosmetic lotions and related specialties.

Western Filling

(From Page 107)

entire line is equipped with many special safety devices to minimize hazards of flammability and toxicity of product, encountered only in cold filling of various and flammable propellant blends.

The refrigeration employed is a cascade type where one system actually cools another. Using refrigerant 22, this unique set up maintains good temperature control and allows very low filling temperatures to be employed where desired. Elimination of product contamination is assured with the six completely separate product heat exchanging systems.

Laboratory, Quality Control

THESE facilities consist of two completely modern laboratories, one for non-food products, and one for food products. The latter will be discussed later. Laboratory personnel, are trained to perform the many exacting tests and analyses required for new product development, chemical raw materials, component parts and finished product controls. The emphasis here is, as it must be, on instrumentation. Chromatographic and moisture analysis, pH and viscosity control, solubilities, pressure determinations, flammability tests, shelf life

studies, sample preparation, product end use evaluation—to mention a few—are accurately performed in the laboratory.

Quality control, which begins with the receiving of materials, thoroughly covers the entire operation. Eight years of diversified aerosol packaging experience has resulted in the realization that this form of packaging is inherently more exacting that most otehr types. Techniques are tied in with product development at Western Filling, resulting in specific procedures for each and every product. In addition, all supervisory and production line personnel are constantly schooled in quality to make every person an inspector in his own right.

Food Division

I^N early 1957, after considerable thought and planning, Western Filling established a food division for the custom packaging of pressurized food products. Believed to be the first operation of its kind in the world, emphasis is being placed on non-aerated streams, spray and foam type products. The first order was taken in March 1957. The product, "Sizl-Spray" barbecue sauce by Anderson Foods, a subsidiary of Heublein Corp. A laboratory was set up under the direction of Robert C. Webster, manager of the food division, who was formerly employed in the metal research and development division of Continental Can Co. He has a thorough background not only in foods and containers, but in pressurized foods as well.

Since pressure package food is a completely new field, nearly all of the equipment had to be designed and built to meet stringent specifications. After considerable trial and error, this line was completed and put in operation in the first part of July, in time to meet production commitments. Mixing, blending, and product finishing equipment is complete, even to the point of supplying hot or chilled product of controlled temperature to the high speed

filling equipment. Cans are steam cleaned, filled, vacuum crimped, sterilized, cooled, gassed, tested and completely assembled at 90 cans per minute. This speed can be increased readily to considerably greater capacity.

It was during this period that previous experience with compressed gas packaging and mechanical spray actuators paid off. A special head was designed for "Sizl-Spray," to set it apart from non-food products as much as possible, and to do the difficult job of spraying without clogging or changing product characteristics over a wide pressure range. The head was made, and is in use today.

Western Filling, in addition to its regular activities, maintains membership in many industry associations. As members of the CSMA, a Western representative is chairman of the Can Pressure Determination Subcommittee, and the recently formed Food Liaison Committee. The company is also active with memberships on the Aerosol Scientific Committee, the Insecticide Standard Methods Subcommittee, the Public Regulations Subcommittee, the Can Clinch Subcommittee and the Membership Committee of the Chemical Specialties Manufacturers Assn. In addition, Western Filling personnel are active in the California Cosmetic Association, one of the oldest cosmetic associations in the country. Active membership is maintained in the Society of Cosmetic Chemists, the Institute of Food Technology, the Society of American Bacteriologists and the American Chemical Society.

The doors are now ajar to new, and staggering possibilities in the pressurized products field. More new products will soon be forthcoming from Western Filling's production lines, incorporating revolutionary ideas, in the food, pharmaceutical and non-food areas. Western Filling will continue to strive, at is has in the past to offer the most complete pressurized packaging service in the country.



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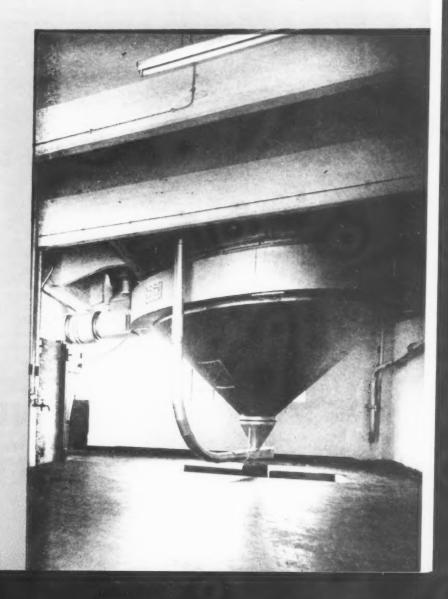
Soap Plant Observer

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New Patents

Bulletins and Equipment

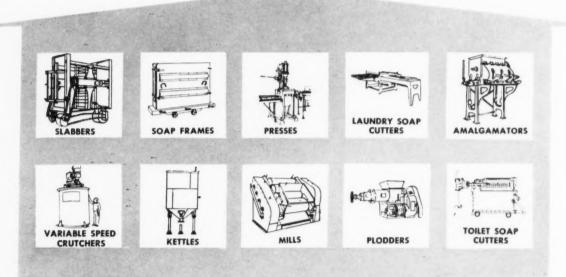
Cone shaped bottom of spray drying lower which converts synthetic detergent slurry into a hollow-beaded product. Tower was built by John W. McCutcheon, Inc., New York consultant, for Mira Lanza, Genoa, Italy, Brick wall at left belongs to hot air furnace. This installation is engineered for countercurrent or concurrent passage of the air stream through the chamber. For details on spray drying soap and detergents see article, page 159.



What are your soap machinery needs?

check your list and mail to us for details

CHECK LIST		
SLABBERS	VARIABLE SPEED CRUTCHERS	
SOAP FRAMES	KETTLES	
PRESSES	MILLS	
LAUNDRY SOAP CUTTERS	PLODDERS	
AMALGAMATORS -	TOILET SOAP CUTTERS	



HOUCHIN MACHINERY CO., INC.

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Manufacturers of soap making machinery for over a century.

Production SECTION

Soap Specifications Reviewed as

A.S.T.M. Committee D-12 Meets

RAFTING of a specification for an all-purpose, high-sudsing, household type detergent and revision of existing soap standards highlighted the annual meeting of Committee D-12 on Soaps and Other Detergents of the American Society for Testing Materials, which convened in New York, March 10-11.

Under the chairmanship of J. C. Harris, Monsanto Chemical Co., Dayton, O., the group honored Frederick W. Smither, formerly of the National Bureau of Standards by presenting him with the first award for outstanding achievement in the field of soap and detergent technology. The award was established by Committee D-12 last year. Mr. Smither, first recipient of the award, was chairman of D-12 from 1948 to 1950 and has been its honorary chairman since that time.

Taking cognizance of the changes that have taken place in the soap industry Subcommittee S-2, Specifications for Soaps Synthetic Detergents, conducted a ballot among D-12 members. They were asked to vote on whether each of 14 soap specifications should be approved, revised, or rejected.

The following standards were reapproved: D 496-51, Chip Soap; D 497-52, Ordinary Laundry Bar Soap; D 498-51, Powdered Soap; D 499-48, White Floating Toilet Soap; D 533-44, Built Soap, Powdered; D 534-42, Alkaline Soap Powder. Standard D-799-51 for liquid toilet soap was reapproved but will be brought up to date by the addition of specifications for paste and concentrate types. It will

Drafts specification for all-purpose, high suds, household detergent and honors F. W. Smither at annual meeting in New York City, Mar. 10-11.



Frederick W. Smither

be made to conform more closely with current Federal specifications; rosin and sequestrant contents will be revised.

Six soap standards were conditionally reapproved. The action

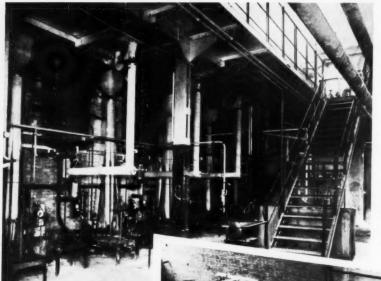
ANYONE wishing to comment on the continued usefulness and validity of the following six specifications pertaining to soaps is asked to communicate directly with chairman of Subcommittee S-2, W. H. Joy, American Telephone & Telegraph Co. 195 Broadway, New York 7, Room 739-E. The specifications are: D 535-52, D 536-52, D 592-42, D 630-42, D 690-48, D 691-44.

is subject to an industry survey to establish whether the products covered are still being produced in significant quantities. This group includes: D 535-52, Palm Oil Solid Soap; D 536-52, Palm Oil Chip Soap; D 592-42, Olive Oil Solid Soap; D 630-42, Olive Oil Chip Soap; D 690-48, Compound Chip Soap (with rosin); D 691-44, Compound Powdered Soap (with rosin). Readers of Soap and Chemical Specialties are invited to send their comments on the continued usefulness and validity of these specifications to W. H. Joy, American Telephone & Telegraph Co., 195 Broadway, Room 739-E, New York 7, chairman of Subcommittee S-2.

One of the soap standards (D 593-42, Salt Water Soap) was considered obsolete by the participants in the ballot. This product has been largely replaced by soap synthetic detergent combinations, usually containing about 65 per cent synthetic detergents. A new, more realistic specification that follows closely the existing military and Canadian government specifications will be written by D-12.

Syndet Specification

Having thus reevaluated its position in the soap field Subcommittee S-2 examined a draft for a specification entitled: Detergent, Synthetic, Built, All Purpose High-Sudsing Household Type. The



CONTINUOUS SAPONIFICATION PLANT SAES/3105 TYPE MANUFACTURED BY MECCANICHE MODERNE

Characteristics and guarantees

- Not saponified : 0.3% maximum.
- Maximum percentage of electrolyte in the finished soap, sodium chloride and free caustic : 0.6%.
- Maximum contents of glycerine in the soap : 0.4%.
- Maximum Alkalinity of glycerine-waters caustic : 0.15%
- Lyes ratio: : minimum 0.350 kg. of lye for each kilo of produced soap.
- Glycerole contents in the waters up to 25%.

Consumption for every 1000 kilos of produced soap

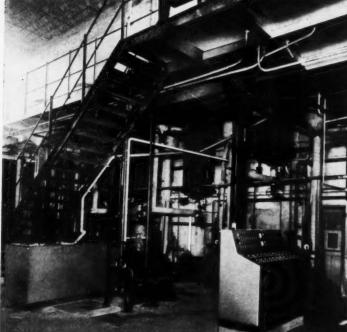
- Installed electric current : about 45 KW.
- Steam : about 200 kg.
- Water : 3000 liters.

This plant is manufactured for the following capacities:

1/4	_	ton	1	hour	
1/2	_	"		11	







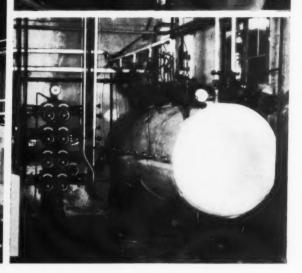


Photo of a 2000 /Kg./hour plant in operation at the Firm "Saponerie Italiane PANIGAL" Bologna (Italy)



MECCANICHE MODERNE

CORSO SEMPIONE, 51

BUSTO ARSIZIO (ITALY) 520 Fifth Ave. N. Y. 36

U. S. SALES REPRESENTATIVES AMERICAN ASSOCIATES specification contains the following provisions.

Scope

1. These specifications cover a built synthetic detergent with high sudsing characteristics for use in manual dishwashing, laundry processes and general cleaning purposes. (This section was accepted without comment.)

General Requirements

2. Built synthetic detergent shall be a high quality homogeneous spray-dried granule consisting essentially of an anionic synthetic organic detergent, complex phosphates and other suitable builders.

 a) The detergent shall produce high suds, clean efficiently, and rinse freely in hot or cold, soft, hard or sea water.

b) It shall be a uniform free flowing powder.

c) It shall be free from objectionable odor.

d) It shall have no injurious effect on the skin.

e) When held under normal storage conditions in the original unopened container for a period of one year, the material shall not cake, develop an objectionable odor, or otherwise deteriorate.

This section dealing with general requirements aroused a lively discussion resulting in a number of changes. In the first sentence the word spray-dried was eliminated and the requirement was broadened to read "homogeneous granule and/or powder . . ." This change was included to protect the interests of smaller companies who may not use spray drying equipment and makes the standard more realistic by covering powders.

In requirement (a) the term "high suds" came in for some criticism but was left standing because it conforms with general usage. Requirement (b) was amended to read "... a uniform white or colored free flowing powder "to recognize the various fancy colored products being re-

tailed at present." Stipulation (d) dealing with cutaneous effects was first changed to apply only to "normal skin" and on further discussion was deleted from the draft.

Chemical Composition

3. Built synthetic detergent shall conform to the following requirements as to chemical composition:

	Min.	Max
Anionic synthetic organic		
detergent, per cent	15	
Complex phosphates*,		
per cent	35	
Sum of synthetic detergent		
and complex phosphates,		
per cent	60	
Orthophosphates, per cent		5
Silicates calculated as SiO ₂ ,		
per cent	3	
Water insoluble		2
Sodium carboxymethyl-		
cellulose **, per cent	0.1	
pH of one per cent solution	9.2	10.6
Soap		nil
Fabric fluorescer		
	present	
Residue retained on No. 12		1 5
sieve, per cent		1.5
* limm tripshophorphate and	for taken	limm

* sodium tripolyphosphate and/or tetrasodium pyrophosphate, ** contractor shall submit certificate of compli-

Discussion of these proportions clarified that the anionic is calculated as 100 per cent active material. The same applies to the CMC. Water insoluble was first set at one half per cent but raised to two per cent in view of the comparatively high percentage of silicate which might be found in such products after prolonged storage.

Basis of Purchase

4. Built synthetic detergent shall be purchased by net weight.

Methods of Samp. & Analysis

5. (a) The material shall be sampled and analyzed in accordance with the Standard Methods of Sampling and Chemical Analysis of Soaps and Synthetic Detergents (ASTM Designation D...) of the American Society for Testing Materials.

(b) The purchaser reserves the right to use any additional available information to ascertain whether the material conforms to these specifications.

Additional points raised in the discussion of this draft included the question whether bulk density of the detergent should not be specified in the general requirements and the possible inclusion of foam stabilizer content in the chemical composition.

The built synthetic detergent standard in its present stage will be published for information only. A task force was set up to supplement this rather general specification with more detailed specifications for alkyl aryl sulfonates and other specific types.

Detergent Test Methods

Subcommittee T-2 Analysis of Soaps and Synthetic Detergents (J. C. Harris, chairman) accepted as standard several revisions of D-460-54, Chemical Analysis of Soaps. One of these is a volumetric method for the determination of phosphates. The method is applicable to any species of alkali metal phosphates free from interfering ions and may be used for analysis of soap and synthetic detergent builders if the sample is properly prepared. Another revision covers the determination of glycerol in soap in the absence of sugars. Sample preparation for the moisture determination in cake soap has been modified to comply with the findings by E. W. Blank, Colgate-Palmolive Co., as summarized in Soap & Chemical Specialties, March 1958, p. 177.

Standard Method D 820-46, Analysis of Soaps Containing Synthetic Detergents, was also revised to incorporate the volumetric method for phosphates determination.

T-2 voted to accept as tentative Standard Methods of Sampling and Chemical Analysis of Alkylbenzene Sulfonates (see Soap & Chemical Specialties, January 1958, pp. 41-44, Analysis of Alkylbenzene Sulfonates by E. W. Blank). These methods cover procedures for the sampling and chemical analysis of paste, powder, or liquid detergent alkylbenzene sulfonates. Also tentatively passed was a method for sampling and a procedure for estimation of sediment in detergent alkylate. Task group 11 of T-2,



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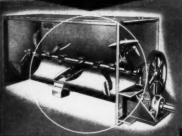
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under the chairmanship of E. W. Blank, also presented an ultraviolet absorption method for the determination of sodium alkyl benzene sulfonate in synthetic detergents, which was accepted as a tentative official method. Methods of sampling and chemical analysis of paste, powder or liquid detergent fatty alkyl sulfates were voted as tentative standards.

"Bibliographical Abstracts of Methods for Analysis of Synthetic Detergents 1933-1957," prepared by Jay C. Harris for Subcommittee T-2 of Committee D-12 was presented at the meeting. The 24-page, paper covered, compilation is available as Special Technical Publication No. 150-B from the American Society of Testing Materials, 1916 Race Street, Philadelphia 3. Methods are classified as to type, as are surface active agents. References are numbered and lettered to maintain the proper author sequence. The seven abstracts for 1956 which appeared in S.T.P. 150-A have been renumbered and included in the current publication. According to Mr. Harris 200 more references are waiting to be included in the next compilation. Those in the field who use these abstracts are urged to supply corrections or additions. Mr. Harris is assistant director of research at Monsanto's research department in Dayton, O.

A suggested characterization of detergent alkylate was submitted to a ballot by mail and evoked a 95 per cent response with only one negative answer. Members of T-2 were invited to form a task group for the analysis of bleaches but the suggestion met with no response as had been the case on previous occasions. Task group 8 of T-2, reported development of a method for the determination of CMC which has good reproducibility and is expected to be ready for presentation next year.

A paper entitled "The Determination of Alkyl Aryl Sulfonates by Ultraviolet Absorption," by R. M. Kelley, E. W. Blank and W. E. Thompson, Colgate-Palmo-

live Co., New York, rounded out the session dealing with analysis of soaps and synthetic detergents. A number of efficient methods are available for the analysis of detergents containing alkyl aryl sulfonates as the sole active agent. But their application to products containing mixed anionic active ingredients is not practical without tedious separation techniques. In a search for a rapid instrumental method specific for alkyl aryl sulfonates in the presence of other detergents, a study of the ultraviolet absorptivity of the alkyl aryl sulfonates was made. A Beckman spectrophotometer, model DU, with ultraviolet accessories and one centimeter matched quartz cells were used.

Dishwashing compounds, liquid detergents and all types of industrial specialty detergents have been analyzed successfully by this method, according to the authors. In addition it has also been found a useful tool for the qualitative identification of alkyl aryl sulfonate. A recording spectrophotometer is used for this type of work.

Interference can be expected from any material showing strong absorption in the 220-230 m_{μ} region. Thus benzene, toluene, and xvlene sulfonates which are used in some ABS formulations cause a positive interference. Polyoxyethylated compounds also present an interference problem. In many cases ABS can be separated from the interference so that the UV absorption method can be used. Low molecular weight sulfonates can be separated from ABS by ether extraction from acidified solution. Separation from interfering nonionics can be effected by use of ion exchange resins.

Applied to heavy duty detergents the method has been proven valid, since the absorption of phospates, silicates, carbonates and CMC has been found low. High dilution used in the analysis has been successful in repressing interference from optical dye, ethanolamine, additives, etc. Alkyl sulfates and soaps offer no interference.

The method is rapid and does not require much skill in routine operation. It is therefore well suited for production control analysis. According to the authors it has been used successfully in the Colgate laboratories over an extended period.

Subcommittee G-2 on Nomenclature and Definitions declared the terms "complexing" and "sequestering" to be synonymous and established a tentative definition for the term "chelating." It also defined "artificially soiled cloth."

Subcommittees S-4 on Specifications for Inorganic Alkaline Detergents (W. Stericker, Philadelphia Quartz Co., chairman) and T-4 on Analysis of Inoganic Alkaline Detergents (W. H. Koch, Olin Mathieson Chemical Corp., chairman) reaffirmed a number of specifications and methods, made some revisions and corrections and heard a paper by R. H. Kolloff of Monsanto Chemical Co., St. Louis, on the "Analysis of Commercial Sodium Tripolyphosphate by Reverse Flow Ion Exchange Chromatography."

Subcommittee T-6, Analysis of Metal Cleaners (H. A. Kafarski, Ford Motor Co., chairman) reaffirmed a number of methods and passed a tentative vitreous enamel corrosion test.

At the business meeting Committee D-12 complied with the rules prescribing an election of officers every second year. All officers were reelected as follows: J. C. Harris, chairman, W. H. Koch, vice-chairman, and E. W. Colt, Lever Brothers Co., secretary. Donald Price, consultant, New York, was elected to the Advisory Committee to succeed V. C. Mehlenbacher, Swift & Co., who resigned.

Fred A. Aston Dies

Fred A. Aston, retired sales manager for national accounts for Oakite Products, Inc., New York, died Mar. 6 at his home in Lauderdale-By-The-Sea, Fla. He was 79 years old. Surviving are his wife Ada, and a son, Fred Jr.

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Book Reviews

Pesticide Proceedings

Proceedings of the eleventh annual convention of the Association of American Pesticide Control Officials, which was held last October in Washington, D. C., are now available, according to H. W. Hamilton, secretary of the Chemical Specialties Manufacturers Association, New York. The 58-page volume costs \$1.00 per copy and may be obtained from Dr. Albert B. Heagy, Association of American Pesticide Control Officials, Inc., Box "HH," University P.O., College Park, Md.

New Day Bulletin

A new four-page bulletin describing its line of three-roll dispersion mills was issued recently by J. H. Day Division of Cleveland Automatic Machine Co., 4932 Beach St., Cincinnati 12. The booklet includes specifications and illustrations of construction features on four mill sizes, including the 14 x 30 inch large production model, the 10 x 22 inch medium production unit, the 5 x 12 inch small production model and the 4 x 8 inch laboratory mill. Features of the Day "Hydra-Set," a new type of roll setting device, are also described.

Modified Falcon Blenders

A modified design of heavy duty mixers is described and illustrated in a new four-page folder issued last month by Falcon Manufacturing Division of First Machinery Corp., 211 Tenth Street, Brooklyn 15, N. Y. Engineered for the mixing of powders, granular materials, pastes or liquids, Falcon ribbon blenders now feature a "sanitary" design, according to the manufacturer. No bolts, screws or rivets are present which might retain contaminants. The welded ribbon assembly is said to be easily removed for cleaning and the center discharge and seals are claimed

to be dust and leak proof.

The bulletin includes a tabulation of specifications, dimensions, and capacities featured by this line of mixing equipment.

New Felton Brochure

A new 24-page brochure containing listings of its complete line of essential oils, aromatic chemicals, balsams, resins and tinctures was issued recently by Felton Chemical Co., 599 Johnson Ave., Brooklyn, N. Y.

The booklet also features information on the firm's perfume bases for toiletries, cosmetics, aerosol toilet preparations and sunscreening agents.

New Spray Nozzle Line

Spraying Systems Co., Bell-wood, Ill., recently announced a new line of spray nozzles, with the body of the units designed to produce a 90 degree elbow turn. Especially suited for installation in cooling and washing equipment, the nozzles, called "Full Jet," are said to provide a full cone spray pattern with uniform distribution.

Where the spray must be directed at a 90 degree angle to the inlet pipe, these nozzles may be installed without use of additional fittings. The units also are avail-

New "Full Jet" Nozzle of Spraying System.



able with spray angles of 65 and 120 degrees.

McCutcheon Issues Bulletin

John W. McCutcheon, Inc., 475 Fifth Avenue, New York 17, recently issued a six page folder describing the scope and nature of its consulting services in the soap, detergent, and allied fields. Headed by John W. McCutcheon, the firm's facilities include two laboratories covering all aspects of fat, soap, and detergent chemistry, an engineering office, and a general office which contains a well stocked library. All types of additional analytical and other pertinent services are available by arrangement.

Plant engineering and construction, plant operating techniques, product development, and product application techniques are among the aspects covered by Mr. McCutcheon and his associates, Marcus Sittenfield, Joseph R. Ehrlich, and Robert McCulloch.

Mr. McCutcheon is the author of "Synthetic Detergents" (1950) and co-author with E. G. Thomssen of "Soap and Detergents" (1949) both published by MacNair-Dorland Co., New York. He writes a monthly column in Soap and Chemical Specialties under the title "Soap Plant Observer".

Allied Plans Name Change

Allied Chemical and Dye Corp., New York, recently announced plans to change its name to Allied Chemical Corp. Glen B. Miller, president, in a proxy statement to shareholders, said directors believed the proposed name change would more clearly reflect the broad nature of the company's position in the chemical industry and would not single out any particular division or field of activity. Allied was founded in 1920.

The recommendation will require the affirmative vote of the holders of a majority of the outstanding common stock at the annual meeting on April 28. If approved, the new name will become effective by May 1.



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SOAP and CHEMICAL SPECIALTIES

NEW Patents

The data listed below is only a brief review of recent patents pertinent to the readers and subscribers of this publication. Complete copies may be obtained by writing to the publisher of this magazine. Mac Nair Dorland Co., 254 W. 31st Street, New York 1, N. Y., and remitting 50c for each copy desired. For orders received from outside of the United States the cost will be \$1.00 per copy.

No. 2,821,536. Production of Wetting, Emulsifying and Washing Agent, patented by Hans Feichtinger, Duisburg-Beek, and Hans Tummes, Duisburg-Meiderich, assignors to Ruhrchemie A.G., Oberhausen-Holten, Germany. The patent teaches a process for the production of wetting, emulsifying, and washing agents of the general formula

RCO-NHC_nH_{2n}SO₃Na

in which R is a member of the group consisting of saturated and unsaturated aliphatic alkyl radicals containing from 11–18 carbon atoms, and n is one of the numbers from 4 to 6, which comprises sulfo-chlorinating hydrochloric acid salts of amines of the general formula $\mathrm{HClH_2NC}_{-\mathrm{H2}_{2+,1}}$ in which n is one of the numbers from 4 to 6, with gaseous chlorine and sulfur dioxide in the presence of a solvent, hydrolyzing the sulfo-chlorination product formed with water, thereafter contacting the aqueous solution formed by the hydrolysis with a fatty acid chloride containing an aliphatic hydrocarbon radical with 11–18 carbon atoms in the presence of sodium hydroxide under alkaline reaction conditions and recovering the reaction product formed.

No. 2,821,851. System for Hydrostatically Testing Containers, patented by Horace S. Daley, Clifton, N. J., assignor to Specialties Development Corp., Belleville, N. J. In a sys-tem for hydrostatically testing con-tainers adapted for storing pressure medium therein, the patent claims the combination of a jacket adapted to be filled with water having an open upper end including a seat and a wall surrounding said seat, volumetric measuring means, conduit means for establishing a fluid flow connection between said jacket and said measuring means, and a cover positioned on said seat to seal said open end having means on the underside thereof for suspending a container to be tested in said jacket and having means for introducing test fluid into the container, said cover fitting into said wall to displace water from said jacket above said seat and having a recess on the underside thereof above the level of said seat for

trapping a small quantity of air and to compress the same as the cover is positioned on said seat.

No. 2,822,002. Dispenser for Flowable Materials, patented by William Mack, Hartford, Conn., assignor to Frank E. Wolcott, Hartford, Conn. This patent covers a dispenser for flowable materials comprising a container for the material to be dispensed, a cap on the container having a receptacle for a cartridge of compressed gas, a pump carried by the cap and removable therewith as a unit having an inlet within the container, a dispensing nozzle on the cap connected to the outlet of the pump, and means forming a gas flow passage separated from the interior of the container and connecting the receptacle and pump for applying compressed gas from the cartridge to the pump, and a manually operable valve in said passage.

No. 2,822,960. Valve Structure, patented by Michael C. Lengel, Bridgeport, Conn. For use in an aerosol container having a valve means and a siphon tube connected thereto, the improvement is claimed of a securing means for positively mounting the tube to the valve means so as to prevent any possible separation of the tube therefrom, said securing means comprising an eyelet having inner and outer depending spaced wall portions. the outer wall portion being provided with a plurality of spaced, longitudin-ally extending slots, said inner de-pending wall portion adapted to be received in the end of said tube so that the tube is disposed between said inner and outer wall portions, and said outer wall portion being inwardly bent to securely grip said end of the tube between the depending walls of said eyelet.

No. 2,822,961. Aerosol Bomb, patented by Nels W. Seaquist, Crystal Lake, Ill. Disclosed is an aerosol bomb comprising a container member containing fluid to be dispensed under superatmospheric pressure, a valve body having a flange extending into an opening of said container member, a compressed resilient annular gasket tightly sleeved over said flange and sealing said opening at one side thereof, means for maintaining said gasket under compression comprising a fusible washer which fuses at a tempera-ture below that at which said pressure causes said container member to explode, said flange having a crimped protein at its inner end maintaining said gasket and washer under compression, normally closed releasable valve means in said valve body, and a delivery tube encircled by said gasket and by said washer, said tube extending approximately to the better. tending approximately to the bottom of the container and being connected to the valve means to deliver said fluid therethrough upon release of said valve means.

No. 2,823,187. Soap Manufacture, patented by Edward B. Coyle, Philadelphia, Pa., assignor to Fels & Co., Philadelphia. In a method of making soap, the step is covered of forming a saponification mixture by heating at a temperature to maintain fluidity but not above about 250° F., fat acid components, caustic soda, and water, in soap making proportions including in percentages by weight 35 to 85% of fat-acid components, 5 to 15% of caustic soda, and rosin up to 15%, the total amount of water present at any time including any water formed by saponification being of from about 3 to 10% by weight, and spraying the resulting saponification mixture as it comes hot and fluid from the saponification step at a pump pressure of from 1000 to 5000 p.s.i. to produce a soap product of particulate free-flowing character without substantial change in the water content.

No. 2,823,185. Laundry Aids, patented by Theodore A. Seegrist, McLean, Va. The patent teaches a process comprising forming an emulsion of a water-immiscible liquid, which is inert toward sodium carboxymethyl cellulose, in water in the presence of an emulsifying agent, and mixing sodium carboxymethyl cellulose therewith to form a curd having at least 20% sodium carboxymethyl cellulose, by weight, with the water and emulsifying agent contained therein and with the water-immiscible liquid separated.

No. 2,824,822. Insect Repellent Method and Composition, patented by Lyle D. Goodhue, Bartlesville and Kenneth E. Cantrel, Dewey, Okla., assignors to Phillips Petroleum Co., Bartlesville. This invention covers a ternary synergistic repellent composition comprising the following three components as the essential active repellent composition: (a) at least one dinalkyl ester of a dicarboxylic acid of pyridine wherein the alkyl groups contain from 2 to 4 carbon atoms, (b) at least one 1-acetoxy-3-phenyl-2-alkene wherein the alkene is an alkene having from three to four carbon atoms, and (c) at least one N-alkyl imide of bicyclo (2.2.1)-5-heptene-2,3-dicarboxylic acid wherein the alkyl radical contains not more than 12 carbon atoms, wherein said alkyl imide is present in the ternary composition in an amount in the range from 25 to 75 percent, on an undiluted basis of said ternary composition and the ratio of said ester of said pyridine carboxylic acid to said 1-acetoxy-3-phenyl-2-alkene is in the range from 4:1 to 1:4.

No. 2,822,312. Microbicidal Composition, Material Impregnated Therewith, and Method of Impregnation, patented by Ernst Bretscher, Basel, and Hans Hemmi, Binningen, Switzerland, assignors by mesne assignments to Saul & Co., Newark, N.J., as nominee of Fidelity Union Trust Co., executive trustee under Sandoz Trust. Revealed is a microbicidal composition for application to cellulose material comprising a mixture of a microbicidal organic mercury compound of the formula

R-Hg-X

wherein R represents a mononuclear aromatic radical and X represents an anionic radical, and a fixing component for said mercury compound comprising the water-soluble polymeric condensation product of a polyalky-lenepolyamine and a member selected from the group consisting of cyanamide and dicyandiamide.



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Aerosol Antiperspirant

Waverly Chemical Co., Mamaroneck, N. Y., recently published a technical bulletin giving information on the uses of "Astringen" brand of complex aluminum hydroxy chloride. The product is said to combine antiperspirant properties with bactericidal and buffering effects. Among various methods of application, the bulletin mentions aerosol spraying. However, although the problem of corrosion has been overcome by the emergence of glass and plastic containers, a word of caution is added about valve clogging which has yet to be eliminated by a valve design which facilitates drainage. A suggested aerosol formulation is given:

"Astringen" "Lanogel 41"	20
(Robinson-Wagner Co.)	1
Hexachlorophene	1
Ethanol SD 40	30
Water	12
Propellant	36

Because aluminum salts have limited solubility in chlorinated solvents, the ratio of antiperspirant liquid to propellant should be about two to one.

The procedure calls for

dissolving hexachlorophene in ethanol (1); diluting "Astringen" and "Lanogel 41" in water (2); add (2) to (1), mix and perfume; filter.

Improved Fungicide

Tetrachlorophenol-fungicide is now available in more free flowing form it was announced recently by Dow Chemical Co., Midland, Mich. Dow's material, "Dowicide 6", is used as a bactericide for incorporation in soluble oils and as a fungicide in the paint industry. The Dow announcement gives credit for the improvement to John C. Vander Weele, whose patent calls for 70 to 801/9 per cent by weight of crystalline 2,3,4,6 tetrachlorophenol and correspondingly, between 30 and 171/2 per cent of pentachlorophenol. About 0.1 per cent of the compound is used in soluble oils and a ratio of three per cent is suggested for oil paint. Vander Weele's patent has been assigned to Dow.

Bleaches Skin-Tested

Four of the most important and most commonly used types of optical bleaches do not exhibit any pronounced irritating or photosensitizing effects on normal skin according to results of a recently published series of clinical and animal studies. They may produce a mild reaction in individuals who are allergic to ultraviolet light.

Knowledge of the cutaneous effects of optical brighteners is gaining in importance since these compounds are finding wider use in household detergents and have been suggested for use in personal products such as shampoos and hair sprays.

Four widely used optical bleaches derived from diaminostilbene disulfonic acid were tested on the skin of 70 individuals, 50 of whom were suffering from eczema. Aqueous solutions applied in these patch tests were more concentrated than those encountered in detergent formulations or suggested for other uses. In this series only one positive reaction occurred in the form of weak erythema.

In tests designed to determine whether optical bleaches are potential photosensitizers, 20 healthy persons and 12 eczema sufferers were subjected to patch tests followed by ultra violet radiation administered in doses below the erythema threshhold. Only two eczema patients reacted to the brighteners under the influence of light. One of these had a long history of extreme sensitivity to sunlight. Phototoxic properties of the brighteners were evaluated by means of acute light shock tests on mice, which were negative. Schimmel Briefs, January 1958.

New Anionic Surfactant

A new anionic surface active agent, claimed to retain good wetting action in the presence of high percentages of acids, alkalis and some electrolytes, was introduced recently by Sole Chemical Corp., 27 East Monroe St., Chicago 3. "Sole-Terge S-2-S" is a sodium-2 ethyl hexyl sulfate concentrate suggested for use as a detergent additive, as a wetting agent in pesticide formulations and in alkali cleansers, and in a number of other specialties. The product comes in 460 pound net, lined drums. Its physical and chemical properties are described in Sole's technical bulletin No. 358-1.

New Antara Booklet

Antara Chemicals, a division of General Aniline and Film Corp., New York, recently published a "Formulators Manual" describing the use of its new idophor concentrate, "Biopal VRO-20," in the manufacture of detergent sanitizers, germicidal rinses, cleaners and sterilizing agents. The 24-page booklet contains formulas and compounding techniques for the manufacture of these products and in addition lists packaging and labeling instructions.

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PRODUCTION Clinic

Emphasis is on the "New" Developments At 1958 Packaging Machinery & Materials Show

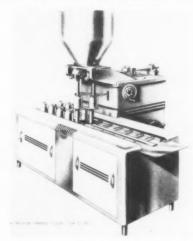
A DVANCES in the technology of both packaging machines and materials highlighted the Packaging Machinery and Materials Exposition of 1958 held at the Convention Hall, Atlantic City, N. J., March 25-28. The show, which occupied approximately 55,000 square feet of floor space, nearly 25 per cent more than the previous exposition, was participated in by 142 leading manufacturers of packaging machinery and materials.

During the show, technical sessions sponsored and conducted by the Packaging Institute, New York, were held Mar. 24, 25 and 26. At these sessions such subjects as "Latest Developments in Packaging Materials" and "Your Packaging Machinery" were discussed.

A special "kick off dinner" was held at the Chalfonte Hotel, March 21.

Among the exhibitors showing new equipment were the following:

Hope Machine Co., Philadelphia. This company introduced a new high speed filler for tiny containers and a new, low cost, two line, piston filler. The new high



Hope Machine Company's new high speed filler for tiny containers.

speed filler, Type 15 RC 1210, is designed for filling small metal containers, ranging in size from ½ to two ounces, with liquid or semiviscous products such as pastes, waxes, greases, etc., at speeds of up to 200 per minute. The unit has a special Hope designed means of obtaining inexpensive "bottom-up fill," accomplished with a special rising conveyor table. Other features are a high speed Rex table

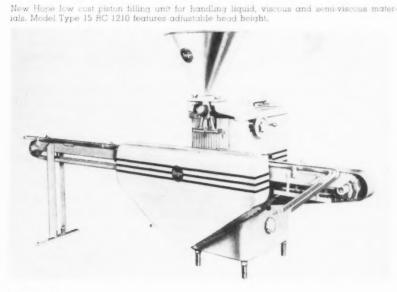
top cross conveyor timed with the filling cycle; "no-container—no fill" control on infeed conveyor, and either single or double piston assembly. Special manifold nozzles are provided with two to five nozzle tips for each manifold.

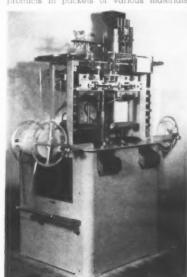
Hope's new low cost piston filler is designed to handle liquid, semi-viscous or viscous products. It has adjustable head height and new diagonal filling position for containers, as well as rising table "bottom up fill" and "no container—no fill" device.

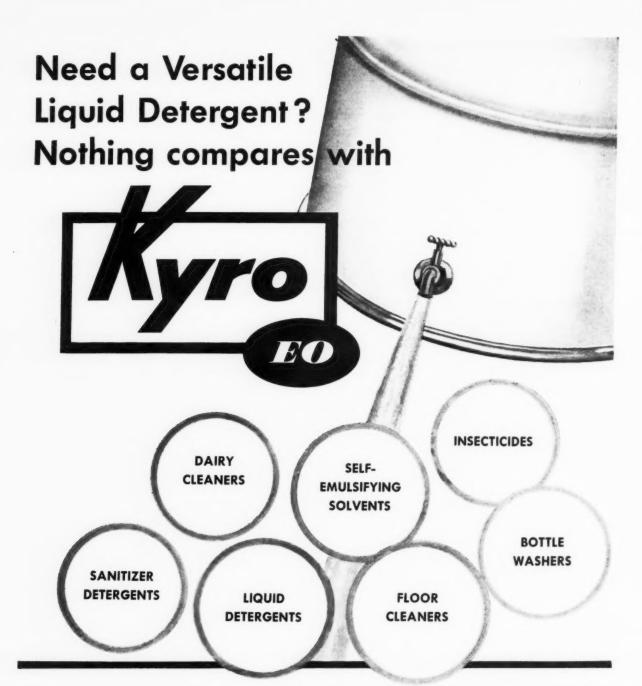
Brown Filling Machine Co., Fitchburg, Mass., featured its new high speed multiple "Powder Packeter" for free-flowing, hygroscopic and granular products. The completely automatic unit forms, fills and heat seals 2, 4, or 8 packets simultaneously at rates of up to 200 packets per minute. It can produce packets varying in size from one inch square to eight inches square. The unit can form a wide range of films, foils, laminates, papers and other heat-sealing materials for powdered, as well as liquid products. It delivers strips of packets with perforated separations or individual packets or joined packets.

Karl Kiefer Machine Co., Cincinnati, featured its new aerosol pressure gassing machine. The unit

New Brown "Powder Packeter" for filling free flowing hygroscopic and granular products in packets of various materials.







Offers superior detergency, wetting and emulsifying powers plus exceptional compatibility!

You can formulate with the high degree of efficiency that brings increased profits by taking advantage of the exceptional physical and chemical properties of KYRO EO. This neutral nonionic synthetic detergent of the 100% alkyl-phenol ethylene oxide condensate type is a remarkably clear, viscous, freeflowing liquid. It has a clean, pleasant odor and is perfectly compatible with anionics, cationics and inorganic salts. In addition, it has ideal detergent, wetting and emulsifying powers and surface tension lowering ability. For further information on KYRO EO, write to:

Orocter & Jamble
Bulk Soap Sales Department, P.O. Box 599, Cincinnati 1, Ohio



FMC's new automatic high speed check weigher spots one per cent weight varia-

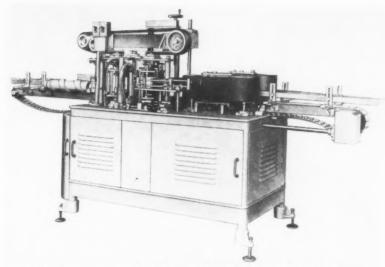
shown was a small, automatic twostation gasser.

FMC Packaging Machinery Division, Food Machinery and Chemical Corp., Philadelphia, displayed and demonstrated its new automatic high speed check weigher that is claimed to spot a one per cent weight variation at speeds of up to 400 packages per minute. The unit can handle a variety of package shapes: round, conical, rectangular, oblong or irregular in size ranges of up to 10 inches wide and 10 inches long with no minimum limit. Weight ranges are from one ounce to one pound or eight ounces to three pounds. Height is adjustable to fit into any in-line conveyor system from 30 to 42 inches.

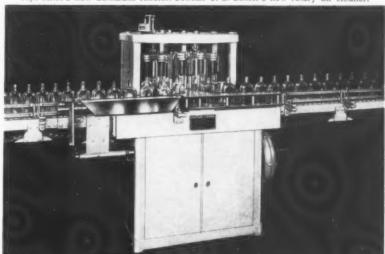
U. S. Bottlers Machinery Co., Chicago, displayed its new "Sanitair" automatic rotary air cleaner. Coming in two models, that shown air cleans bottles and jars of up to four inches in diameter at a capacity rate of up to 250 per minute. It is designed, also, to protect against failure of aerosol valves.

MRM Co., Brooklyn, introduced an automatic labeler for affixing single paste labels of up to six by eight inches, and wraparound labels on containers of up to 21/4 inches in diameter. Model "CM" has variable speed drive which can be regulated for capacities of from 40 to 150 containers per minute. The unit handles glass, cardboard, plastic and metal containers and affixes single panel labels on containers ranging from one ounce to one gallon.

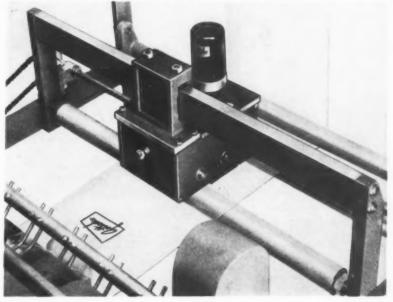
Adolph Gottscho, Inc., Hill-(Turn to Page 183)

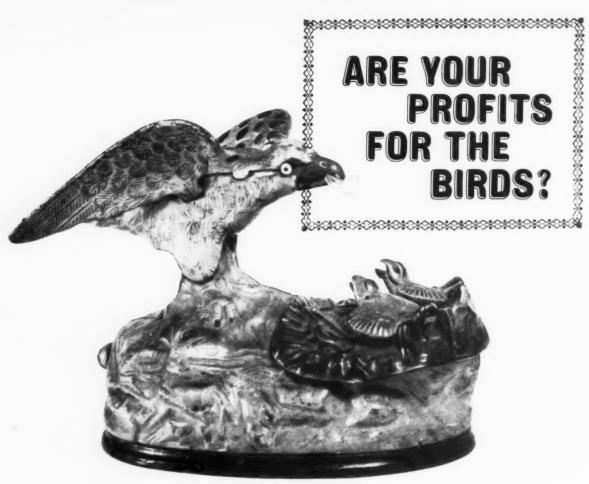


Top: MRM'S new automatic labeler. Bottom: U. S. Bottler's new rotary air cleaner.



Gottscho's new "Rolaprinter" imprint attachment,







rbis can show you economies in odors that put your products in favor and more profits in the bank.

The art of making scents make cents is a proud art at Orbis. Whatever scented product you market, an Orbis Odor will help it prosper.



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BANK ON ORBIS SCENTS AND SAVE DOLLARS

SOAP PLANT Observer

By John W. McCutcheon

PRAY drying has developed into one of the classic methods for the large scale production of soap and detergent powders for household use. Strictly speaking the Mazzoni method for the manufacture of toilet soap, described in last month's column, could be classed as a spray drying process. Mazzoni uses spray nozzles to inject soap into a system of vacuum chambers to reduce moisture content. Today, however, the term "spray drying" is usually applied to the manufacture of soap or detergent powders.

Spray drying of soap into a powder for household use was introduced about 30 years ago. From that time onwards, soap powder began to displace the time honored laundry bar, which gradually began to disappear. Legal tangles over patent rights prevailed during the mid 'thirties, but eventually the patent situation was clarified.

During the period of legal strife many modified methods were tried, either to improve the process or to avoid patent litigation. In one instance the soap was blown in a horizontal tower—rather successfully, too. The only real problem lay in the fact that the formulation had to be changed daily in accordance with the humidity!

The "Kestner" tower of English origin is probably the best known early installation for the spraying of a non-bead type prodduct. This tower had a short squat body and featured a disc rotating at high speed for the dispersal of the soap slurry. The characteristic product turned out by this type of tower was a finely divided dense powder.

If detergent slurries are processed in such towers the final product is generally dusty. Not always though; the writer has seen detergents of special base that



were admirably blown to a dust free product by such towers. On the other hand, the author has been called upon to modify such type of equipment to avoid dust formed because of the nature of the detergent base or the formulation.

The advantages of a beaded type product over a finely divided dense powder were not fully understood by detergent makers who did not have previous soap making experience, Because of this lack of appreciation of the hollow bead, a number of "Kestner" type towers were erected in America during the period from 1946 to 1950, Some of these were engineered by domestic firms which were not specialized in the soap or detergent field but who were drawing on their experience in the spray drying of milk, coffee extract and other foods and beverages. Although these towers turned out fairly acceptable industrial products, they generally failed miserably when an attempt was made to spray dry detergents for retail use.

Why did these towers fail? First, as mentioned, the product was dusty, a shortcoming on which the housewife was very sensitive. Many late comers to the detergent field were unaware of the housewife's aversion to a dusty product,

One manufacturer kept stubbornly trying to force such a product on the market over a period of years. Although well formulated, the item had a poor physical form. The manufacturer almost went bankrupt in the attempt.

A second factor is solubility: the hollow bead goes into solution more readily. A third point is density: the American housewife had been conditioned to a package of a certain size. A dense product had a ready-made fight on its hands. Actually the converse is also true: beaded products can be made that are so light in density that it would take a tent to hold a pound!

Actually such excessively light soap products did occur in the early days of spray drying. They were wisely withdrawn from the market before much damage could be done. (A pioneer may sometimes get away with a mistake or two like this.) In an established market with keen competition, it is about as easy for a manufacturer to change product density as it is for an independent dressmaker to change the hem line on a dress!

Incidentally, in some countries where soap and detergent manufacturing facilities are not yet fully developed, a few manufacturers still persist in the mistaken belief that their customers will accept products of inferior physical characteristics. Such operators will try to save money by erecting towers which turn out powders unable to compete with products of other local manufacture or with imported merchandise.

The writer has talked with numerous representatives from various foreign countries and has examined many of their locally manufactured products.

In most cases these people are extremely well informed and many of them have graduated from American universities. Yet it appears that many will repeat the errors some of us made ten to twelve years ago with respect to spray drying.

An adequate tower for spray drying a retail product must have



CRYSTALLINE STRUCTURE IS BEST IN GROCO 55L STEARIC ACID

What you see above is no accident. We broke this slab of GROCO 55L to reveal the true stearic-palmitic crystal structure. It is a sure indication of the most favorable balance between palmitic and stearic acids—approximately equal parts. This ratio is a must if you are to produce cosmetic creams that won't shrink from the walls of their containers. Or buffing compound bars that release easily from their molds.

The 0.2 maximum iodine value for GROCO 55L—a new, high commercial standard—is equally outstanding. It is one reason why GROCO 55L holds to its brilliant whiteness—either in storage or under heat—and why products based on

it stay pure and fresh longer than with other stearic acids.

Add exceptional freedom from odor that carries through to the end product. Unequalled freedom from esters. Unmatched low content of unsaponifiables. Complete freedom from metallic contamination. Assured uniformity from shipment to shipment.

The sum total of so many top qualities in a single product clearly suggests that you "Always Specify A. Gross" when it comes to stearic acid. You'll come out better—whether you make cosmetics, toilet goods, soap, pharmaceuticals, food emulsifiers, plastics or paints.

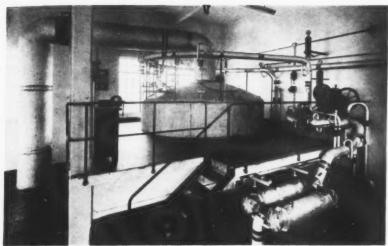
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Top of detergent spray drying tower, pumps and filters, large duct is hot air cutlet.

a certain minimum depth of fall. Generally this means towers of substantial height, usually 80 to 120 feet high, although they can be made as low as 60 feet on occasion. They should have a minimum diameter of 12 feet to permit free fall of the particles a distance equivalent to three quarters of their moisture dissipation. Such specifications immediately place an economic limit on the size of the tower. Production capacity under one thousand pounds an hour would be of questionable design.

The presence of multiple cyclones indicates a dust problem that should not exist. Total dust and product loss on the cyclone and filter system should not exceed five per cent. Wet filters are

necessary only in special cases. Dual air pumps are needed to maintain uniform even flow at controllable pressures essential for product uniformity. An air duct system for product transfer to storage bins is a necessity except under very unusual circumstances. If the product is a properly made bead conforming with current standards, it will not stand conveyor type handling without undue breakdown. The body of the tower and major air ducts, particularly those carrying moist air from the tower must be insulated.

Controls must completely cover furnace temperatures, air inlet and outlet temperature, air pressure fluctuations, slurry inlet temperatures and pressures.

Finally, the materials of con-

struction should be selected to prevent product contamination. This does not necessarily mean a stainless steel clad tower. It does mean that if the tower is to be used for synthetics as well as soap, the upper sections of the tower must be of specially clad construction. Furthermore, pumps, lines, valves, drop tanks, crutchers, heat exchangers and other parts which come into contact with the slurry must be made of special metals designed for difficult service. Nickel, stainless, monel, etc., are generally used.

The nozzles of such towers should be of the fixed type, and air circulation should be countercurrent to the falling particles. Inclusion of all these factors adds up to a tower of substantial cost. Of course we are discussing here a tower for the production of a beaded type soap or detergent product conforming with the standards generally accepted for such retail products. This study will be concluded next month by a review of some factors governing the design and operation of such spray towers.

Corn Products Dividends

Corn Products Refining Co., New York, recently increased its quarterly dividend for the second consecutive quarter with declaration of 45 cents per share, payable on Apr. 25. The previous quarterly dividend was 40 cents, declared in December, 1957. Prior to that, the rate had been 371/6 cents.

Wax Testing

(From Page 97)

results. The advantages and disadvantages of this method are described.

The second method, involving the use of a vinyl tile on a Taber Abrader, correlates reasonably well with the isotope procedure, except that care must be taken in interpreting results because of the differences found between wax-base and polymer-base





dry neutralization liquid detergents

emulsion cleaners

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A

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Pilot ABS-99, dodecyl benzene sulfonic concentrate. offers amazing flexibility for your detergent formulation: for direct neutralization of carbonate or bicarbonate mixtures to give dry compounds; can be mixed with a variety of bases and solvents for oil or water dispersable products; will form low sulfate liquids and pastes of light color for all-purpose liquid detergents; will form amine sulfonates which are directly soluble in oil, alcohol and non-aqueous media.

ABS-99 is made by Pilot's unique Cold Processing and gives 14% more active ingredient than ordinary 88% pure sulfonic concentrates. Detergent products can be made more efficient and manufactured at a lower processing cost by using highly concentrated Pilot ABS-99.

Because of its high purity, ABS-99 may be kept in plain steel containers!

Write now for technical information and sample.







New Soap Firm

Ariba, Inc., 44 Whitehall St., New York 4, has been granted a charter of incorporation to manufacture soaps and detergents. A capital stock of 200 shares, no par value, was listed. Directors of the corporation are George J. Lederer, Bronx, N. Y., and Thomas Stokes, New York.

Insect Repellency

(From Page 88)

the material must be applied to the point of run-off. Where quantities and concentrations are equal, oil solutions are generally effective for longer than water emulsions. Oil solutions should be applied evenly over the surface, though not so copiously as water.

As with all sprays, the nature of the treated surface also affects performance. Metal or glass surfaces sometimes retain their repellency better than wood or brick, sometimes less effectively, depending on the formulation.

These facts become obvious when they are explained. They become reasonable, logical, and even inevitable. The farmer who sprayed one pint on 19 head of cattle saw his error and became an enthusiastic user of repellent sprays thereafter. The operators who switch from fog to a coarse wet spray (where indicated) find they achieve good residual results. Those who wait for desensitization (where it occurs) to pass are highly impressed with the subsequent results.

Repellency is new. It is important. But it needs to be viewed in its proper perspective. If repellent materials are used as repellents should be used, if their performance is weighed according to their potential benefits, if their advantages and limitations are clearly understood . . . then they cannot help but contribute immeasurably to increased production and profits for the dairy and livestock farmer, and also provide broader commercial markets for professional workers in insect control.

Detergent Effectiveness

(From Page 50)

interactions in the analysis of variance.

The factorial structure for the fourth investigation again was set up to make certain planned comparisons. Over both fabrics, the two detergents, D7 and D8, showed no difference, but there was a large and significant difference between the hard and softened rinses. The interaction that appears to be indicated by the means in the twoway table is not judged significant by the analysis of variance. Separate fabric analyses brought out the additional information that the rinse difference just noted was due to the effect with cotton since rinses showed no effect for "Dacron."

Summary

RESULTS are reported for four experiments designed primarily to give information on the relative effectiveness of synthetic detergents and soaps in hard (25 grain) and softened (0 to 0.5 grain) wash and rinse waters and on synthetic detergents in hard wash water with hard versus softened rinse water. The test samples were cotton and "Dacron" swatches soiled with a solution of carboxyltagged tripalmitin in olive oil. The swatches were washed in four home washers.

An overall result verified with four washers, five synthetic detergents and two soaps is that a greater percentage of soil is removed from "Dacron" than cotton, under the same washing conditions.

Of the four synthetics used in the hard wash and rinse water tests in two washers, one detergent, D1, was clearly superior for laundering cotton. Two synthetic detergents, D2 and D4, with different sudsing characteristics but made by the same manufacturer, gave comparable results. One detergent, D3, appeared to be somewhat less effective than the other three.

Of the three synthetics and one soap used in the softened wash and rinse water tests in two washers, the soap D5 was superior for cotton and "Dacron" swatches. Synthetic detergent D1 was definitely superior to the other two synthetics, D2 and D3, only for "Dacron." The marked superiority of D1 for cotton in the hard wash water tests was not observed in the softened water tests with lower synthetic detergent concentration. Again as in the hard water tests, D3 appeared inferior to D2, but the difference, D2-D3, was of the order of sampling variation.

The interpretation of the tests with two soaps and two synthetic detergents in the washerdryer appliance is given in the text. It is especially noteworthy that significant differences were obtained with a soap concentration of 0.026 per cent and a synthetic detergent concentration of 0.11 per cent—concentrations of the order of magnitude of those recommended for use with this appliance.

The interpretation of the tests with two synthetics, D7 and D8, in hard wash and rinse waters and in hard wash and softened rinse waters is also given in the text. For this series of tests it is worth observing that the experimental procedure and experimental design were adequate for detecting the difference between hard and softened rinse water.

The discussion of the significant differences among detergents given in this article is based on an analysis of "counts" to 6400. It appears from observation of "counts" to 3200 that the same differences might have been evident with "counts" to 3200.

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- 4. David B. Duncan, "Significance Tests for Differences Between Ranked Treatments in an Analysis of Variance", Tech. Rpt. No. 3, June 1953, to Office of Ordnance Research, Dept. of the Army, from the Dept. of Statistics, Va. Polytechnic Inst., Blacksburg, Va.

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News.

PEOPLE . PRODUCTS . PLANTS

New M.Y.C. Sanitary Code

Lever Sales Set Record

Adell Answers FTC Charge

Pyrethrum Board Changes

L. Marsh Reese, has been appointed regional general manager of the Canadian Eastern Division of G. H. Wood & Co., Toronto, it was announced recently by Geoffrey H. Wood, president of the firm.





The skin's best friend

DEHYDAG WAX SX

the outstanding self-emulsifying component for oil-in-water emulsions, ideal for the preparation of cosmetic creams and pharmaceutical ointments.

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A///

SOAP and CHEMICAL SPECIALTIES

News

Lamco Appoints Larson

Lamco Chemical Co., Boston, manufacturers of waxes, polishes and cleaners, has appointed



Ralph Larson

Ralph Larson to its sales staff, it was announced recently by Carl Lamm, president. Mr. Larson has had extensive experience in the construction field where he supervised the installation of more than nine million square feet of flooring material, including concrete, terrazzo, wood, and asphalt, vinyl, rubber, and vinyl asbestos tile.

Record Lever Sales

Lever Brothers Co., New York, recently reported that its sales during 1957 reached an all-time high of \$345,600,000. Net income amounted to \$5,900,000. Comparison figures with the previous year were not disclosed. William H. Burkhart, Lever president, said that 1957 "was a year of progress" and "sales and profits showed a strong upward trend."

G. H. Wood Names Reese

Appointment of L. Marsh Reese as regional general manager of the Canadian eastern division of G. H. Wood&Co., Ltd., Foronto, manufacturers and distributors of household cleaning specialties and industrial sanitation products, was announced recently by Geoffrey H. Wood, president and general manager. Mr. Reese will make his headquarters in Montreal and will be responsible for the company's eastern branches in Halifax, Sydney, St. John's, Nfld.; St. John, N. B.; Moncton, Charlottetown, Three Rivers, Sherbrooke and Quebec City.

Adell Challenges FTC

Adell Chemical Co., Holyoke, Mass., recently challenged a Federal Trade Commission complaint accusing "Lestoil" all-purpose liquid cleaner of being flammable. The company said that "Lestoil" is safe "when used in accordance with instructions."

The FTC complaint stated that a "dangerous fire hazard" might result in normal household use of the product. The commission said on Feb. 9 that "Lestoil" will vaporize into a flammable mixture under many conditions commonly encountered."

In asking that the allegation be dismissed, Adell denied an FTC complaint that it has deceived a "substantial portion of the purchasing public" in its labeling and television advertising.

A hearing was to have been held in Boston on April 8.

John M. Shea Dies

John M. Shea, 48, New England sales manager for John H. Breck, Inc., Springfield, Mass., died Mar. 3. He had been with the company since 1945.

Hunnewell Elects Keller

Election of A. A. Keller as secretary and treasurer of Hunne-well Soap Co., Cincinnati, was announced recently by Leslie Webb, president. Mr. Keller previously was associated with Jerks Socks Co., for 30 years in a similar capacity. He sucreeds C. A. Young, who recently retired. Mr. Young had been secretary and treasurer since 1940.

Named to Alcolac Board

Election of Carl Pacifico to the board of directors of American Alcolac Corp., Baltimore, was an-



Carl Pacifico

nounced recently by Vova Blinoff, board chairman. Mr. Pacifico is a vice-president of the company, in charge of its sales program, a post he assumed in June, 1956. He also manages the development department.

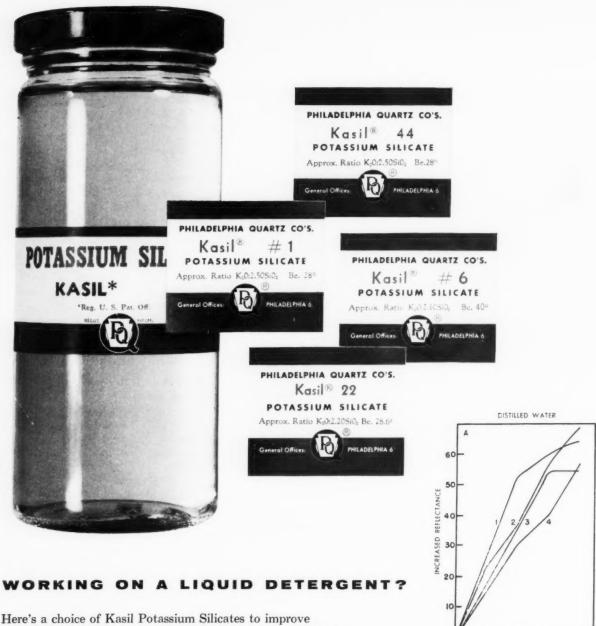
Prior to joining Alcolac in 1954, Mr. Pacifico had been director of development for Wyandotte Chemicals Corp., Wyandotte, Mich., which he joined in 1949.

Hollingshead Names Rep.

R. M. Hollingshead Corp., Camden, N. J., has appointed Advanced Maintenance Co., Chester, N. J., as distributor in northern New Jersey for its full line of building maintenance chemicals. Advanced is headed by Thomas Cassidy, Jr., who has been associated with the sanitary chemicals field for many years.

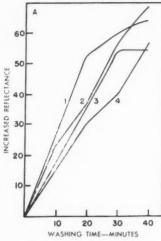
Asce Changes Firm Name

Asco Electronics Co., manufacturer of insecticides, has changed its corporate name and moved into a new and larger plant in Hudson, N. H. The firm, which formerly was located in Andover, Mass., will now be known as Asco Laboratories.



cleansing power. Kasil Potassium Silicates have good detergent action-you can increase sudsing and improve soil suspension properties. The chart is based on a study to measure the speed and efficiency of potassium silicates in removing soil.

If you need a sodium-free silicate, let us suggest a Kasil for your own experiments. One of Kasil Potassium Silicates can fit your formulas for a liquid detergent or a semi-paste soap.



Removal of graphite soil at 60° C. with 0.65% detergent consisting of 80% potash soap and 20% of a builder. (1) Kasil #1, (2) Kasil #6, (3) potassium carbonate, (4) soap

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Pyrethrum Boards Announce Changes

TERMINATION of a long standing agreement whereby Greene Trading Co., New York, was U. S.



H. Alvin Smith

sales agent for African pyrethrum growers was announced late last month. At the same time, the appointment of H. Alvin Smith, formerly president of John Powell & Co., New York, insecticide formulators, as special representative in America, was revealed.

The announcement was made by the Pyrethrum Board of Kenya, as spokesman for Kenya Colony growers as well as the Pyrethrum Board of Tanganyika and the Societe Cooperative des Produits Agricoles of the Belgian Congo. The boards also announced termination as of March 10, 1958, of an agreement whereby Mitchell Cotts & Co., London, acted as pyrethrum sales agent. As a result of this action Greene Trading Co., a wholly owned subsidiary of Mitchell Cotts, ceases to be sales agent in the United States.

During the transition period while new sales representation is being arranged, Greene Trading Co., headed by George E. Nixon, president, continues to act as previously on all existing contracts.

The new special representative of the joint boards in the United States, Mr. Smith, is quoted in the announcement as saying that he had agreed to undertake his special assignment in an advisory capacity and "with no intention of participating in the functions carried out by Greene Trading

Mr. Smith, who currently operates New Suffolk Shipyard at New Suffolk, Long Island, served as president of John Powell & Co., New York, from 1950 until its sale to Olin Mathicson Chemical Corp. in June, 1952.

He was appointed chief executive officer of the company in 1948, when John Powell, founder and president, resigned. Mr. Smith joined the Powell company in 1941, was named treasurer two years later and in 1945 was elected vice-president.

Babbitt Appoints Three

Appointments of Michael Cerra, Allan Wikman, Jr., and Kenneth F. Maisch to head the newly-formed marketing service division of B. T. Babbitt, Inc., New York, were announced late last month by Jack W. Sugden, vice-president and director of marketing. Mr. Cerra will serve as market research manager, while Mr. Wikman has been named new products manager. Mr. Maisch will continue in his former capacity of sales promotion manager.

Mr. Cerra formerly was assistant to the market research director. Prior to this, he did market research work with Kenyon & Eckhardt and Lennen & Newell advertising agencies. Mr. Wikman comes to Babbitt from Warner-Lambert Pharmaceutical Co., Morris Plains, N. J., where he served in the family

products division. Prior to that, he was associated with the household products division of Colgate-Palmolive Co., New York. With Babbitt since 1955, Mr. Maisch had previously been promotion manager of Wilbert Products Co., New York.

Givaudan to Relocate

Givaudan-Delawanna, Inc., New York, recently announced that on May 10th it will move to new quarters at 321 West 44th St., New York 36. The firm presently is located at 330 West 42nd St., New York 36.

Donald M. Pfeiffer Dies

Donald M. Pfeiffer, vice-president and general manager of Akron Soap Co., Akron, O., died Mar. 3 in Akron General Hospital after an illness of seven months. He was 65 years old. Mr. Pfeiffer served many local civic groups and at one time was associated with B. F. Goodrich Co. Surviving are his widow, Ruth Duncan Pfeiffer, whose father, the late Adam Duncan, was founder of Akron Soap Co.; a daughter, Mrs. Donald McCann, Jr., Warrensville Heights, O.; a sister and two grandsons.

P&G Moves N. Y. Office

Procter & Gamble Co., Cincinnati, moved its New York sales office on Mar. 31 to new and larger quarters in the Crowell Collier Building, 640 Fifth Ave. Under a long-term agreement, the company leased the entire 12th floor of the building, which contains 7,500 square feet of floor space. The offices formerly were located at 155 East 44 St.

Michael Cerra



Allan Wikman



Kenneth F. Maisch



onyx offers:
new
handbook
of
surface-active
agents



Onyx takes great pleasure in announcing the publication of its new handbook of surface-active agents. Designed for easy reference, the handbook groups 90 different Onyx surfactants in three major categories: (1) Anionics, (2) Cationics, and (3) Non-ionics. Product descriptive data — including specific applications and properties are tabulated in a standard format throughout the booklet. A general explanation of what surface-active agents are and what they do is contained in the foreword. HOW TO GET IT — merely request the new Onyx handbook on your company letterhead and indicate your particular interest in surfactants. No charge or obligation of course. For prompt action write to HANDBOOK, ONYX OIL & CHEMICAL COMPANY, 190 Warren Street, Jersey City 2, N. J.



New York City Plans New Sanitary Code

EXTENSIVE revision of the sanitary code of New York City is now reaching the stage where several articles of the code are at the proposed draft stage. Second drafts of the articles on hazardous substances; control of rodents, insects and other pests, and fumigation and extermination have been prepared and are being circularized for comment by Commissioner of Health, Dr. Leona Baumgartner.

Article 211, dealing with hazardous substances, prohibits the sale of caustic soda ("lye") for household use, "or a substance containing more than five per cent of lye by weight." This section (211.15) is new.

The requirement that sodium fluoride used as a rodenticide or insecticide be colored blue or green and packed in non-refillable containers of five pounds or less for sale in powdered form is continued in the proposed code.

Definitions of "hazardous substance" is new; that covering "irritant" is broadened to include "sensitizing substances;" "poison" is defined in a different manner.

Article 149 dealing with fumigation and extermination contains a number of new provisions dealing with the use of rodenticides and insecticides. Such products not registered under the Federal Insecticide, Fungicide and Rodenticide Act or "not found by the Department (of Health) to be eligible for such registration" cannot be used. Further, a registered rodenticide or insecticide may be used only in accordance with the approved directions, Section 149.15 (c) prohibits the refilling of food, drug or cosmetic containers with insecticides or rodenticides. Article 211 will contain a similar provision which will apply to all hazardous substances. Under section 149.17, sodium fluoride and other poisonous insecticides and rodenticides cannot be used in a food establishment or in a place which manufactures, packages, holds for sale

or sells drugs without a special permit for such use.

A new section, Article 127, deals with control of rodents, insects and other pests. Provisions are included for achieving elimination of insects and other pests from food establishments which are derived from the present code.

New Acrylate for Polishes

A new acrylic resin for floor polish formulation was introduced last month by Reichhold Chemicals, Inc., White Plains, N. Y. The new polymer latex is said to resemble the acrylic made by S. G. Johnson & Son, Inc., Racine, Wis., for use in "Klear," Johnson's new selfpolishing floor wax.

According to RCI its new product, "9425 Acripol," is the first acrylate to be marketed to the floor polish industry accompanied by test results establishing its use properties. Exceptional gloss is claimed for formulations based on "Acripol." This is largely attributable to the ability of the latex to rest on the surface rather than be dissipated into the porcs of the substrate. A second factor favoring gloss is the tendency of the plasticized "Acripol" resin particles to coalesce or run together into a continuous film instead of remaining as discrete particles as waxes sometimes do.

Typical polish composition suggested by RCI calls for 70 per cent or more "Acripol," 15 per cent or less of emulsified wax, and 15 per cent "Waterez 1551," one of the alkali soluble modified alkyds recently introduced by the firm. In addition to good gloss, such films are said to exhibit good scuff resistance, spreading properties, water spot resistance, removability, and stability. These claims are substantiated by tests conducted on Official Test Linoleum of the Chemical Specialties Manufacturers Association. Results of these tests and property changes through modifications of the formulation are described and illustrated by diagrams included in RCI Technical Bulletin SC-27. Information is also sup-

(Turn to Page 177)

Winston Hill technical center of Procter & Gamble Co., Cincinnati, shown below in scale model, has advanced from planning to construction stage. The technical center, to be built in northern Cincinnati, will have four buildings arranged "campus style" to house offices, product development laboratories, and service facilities. Excavations for building areas have been under way since last September. Shown discussing the new center are G. R. Denker (right), resident engineer, and R. H. Kellogg, recently named manager of buildings and service. Completion of construction is expected by May, 1959.







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Who is better qualified to give you practical technical assistance on organic chemical problems than the men responsible for the daily operation of a modern organic chemicals plant?

To give you the kind of service you need, operating and design engineers, process control chemists and material handling specialists from our Doe Run Plant are available now to assist your production men with problems common to organic chemicals.

Our experience in producing organics can go a long way in helping you in using these chemicals. For information call or write today.

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ORGANIC CHEMICALS DIVISION OLIN MATHIESON CHEMICAL CORPORATION ONE PARK AVENUE, NEW YORK 16, NEW YORK

SOAP and CHEMICAL SPECIALTIES

Rybolt in New Post

Appointment of Charles H. Rybolt as director of chemical divisions for Wallace & Tiernan,



Charles H. Rybolt

Inc., Belleville, N. J., was announced recently by F. G. Merckel, president. In his new assignment, Mr. Rybolt will remain as general manager of the firm's Lucidol division, and will direct the activities of the Harchem and chemical divisions. He joined Wallace & Tiernan in 1941 as a sales engineer in the equipment division. Two years later he became assistant superintendent of chemical manufacturing at the Belleville plant, and in 1946 was transferred to Ludicol as sales manager. He was made general manager in 1954.

PCO Congress in Vienna

The Second International Congress of Pest Control Operators will be held in Vienna, May 14-18. A committee of four is being delegated by the National Pest Control Association to represent the American group at the meeting and to learn details about a proposed international body. The committee will report its findings to the board of NPCA, which will decide on participation in any international group, should it become a reality.

U. S. delegates are: J. Wilfred Gunn, Hollywood Termite Control Co., Los Angeles, Calif.; Ruby E. Abel, Abel Exterminating Co., Dallas, Tex.; Walter Blank, Abalene Pest Control Service, Inc., New York; and Maurice Oser, Oser Exterminating Co., Denver, Colo.

Tours are being arranged in connection with the Vienna meeting. Duration varies from 17 to 35 days, priced from \$845 to \$1185. Interested parties should communicate with Prof. J. J. Davis at Purdue University, Lafayette, Ind.; Maurice Oser at 1051 12th Street, Denver; or with Walter O. Blank at 799 Broadway, New York, N. Y.

American Potash Sales Up

American Potash & Chemical Corp., Los Angeles, recently reported an increase in sales and a decline in earnings during 1957. Net sales totaled an all-time high of \$42,837,213, compared with \$41,750,628 in 1956. Net income amounted to \$1,706,235, equal to share earnings of \$2.35. This compared with \$5,103,091 and \$2.64 in 1956.

Babb on FPA Board

Jervis J. Babb, board chairman of Lever Brothers Co., New York, has been elected to the board of directors of the Foreign Policy Association, a national non-profit organization devoted to citizen education in world affairs, it was announced recently. Mr. Babb is also a vice chairman and trustee of the Committee for Economic Development, a trustee of the American Heritage Foundation and the Joint Council for Economic Education, and is a member of the National Industrial Conference Board.

Jervis J. Babb



Sinclair Names Hart

Appointment of Robert L. Hart as Philadelphia district sales representative for Sinclair Chemi-



Robert L. Hart

cals, Inc., New York, was announced recently. Mr. Hart joined Sinclair Refining Co., New York, in 1950 as an industrial sales engineer. He came with Sinclair Chemicals, its affiliate, in 1954 as a sales engineer, located in Chicago.

SAACI Committee Chairmen

The following were appointed 1958 committee chairmen for the Salesmen's Association of the American Chemical Industry, Inc., it was announced recently by Robert J. Roberts, Emery Industries, Inc., SAACI president.

John M. Glaze, Hooker Electrochemical Co., admissions; Walter Farley, Chas. L. Huisking & Co., auditing; Leroy London, E. I. du Pont de Nemours & Co., educational; Cliff Heathcote, Monsanto Chemical Co., employment; Paul E. McCoy, American Potash & Chemical Corp., entertainment: Frank R. Reynolds, Publicker Industries, Inc., golf; Dwight Moody, The Journal of Commerce, publicity: Raymond Tower, Westvaco Chemical Division of Food Machinery and Chemical Corp., sales clinic; George F. Smith, Millmaster Chemical Corp., fare; and Vincent L. Rebak, Grace Chemical Co., committee of tomororw.

Metered Container Survey

Consumer reaction towards a heavy-duty detergent packaged in a metered container was tested recently in a market research survey sponsored by U. S. Metered Container Corp., 527 Madison Ave., New York. Results of the study are



able to get away from it all knowing the problems you leave behind are in the most capable hands and will be properly attended to? That is one of the great advantages of dealing with an organization such as ours: when you've assigned us a perfume or odorizing problem, you can then forget it, sure in the knowledge that every detail—from our initial study of your needs . . . subsequent submission of samples . . . final manufacture and delivery of materials—all will receive meticulous care. So why not be really carefree and let FRITZSCHE perfume specialists take full responsibility for your product's odor superiority! May we talk it over?



BRANCH OFFICES and *STOCKS: Atlanta, Georgia, Boston, Massachusetts, *Chicago, Illinois, Cincinnati, Obio, *Los Angeles, California, Philadelphia, Pennsylvania, San Francisco, California, St. Louis, Missouri, Montreal and *Toronto, Canada and *Mexico, D. F. FACTORY: Clifton, N. J.

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ODORANTS and DEODORANTS
for INDUSTRIAL and
TECHNICAL USE

MADE-TO-ORDER FRAGRANCES for PERFUMES, TOILETRIES and COSMETICS

SUPPLIERS of ESSENTIAL OILS, AROMATIC CHEMICALS, BASIC PERFUME and FLAVOR RAW MATERIALS published in a new 18-page brochure, which is available from the company. The detergent chosen was of the conventional type and tradenamed "Way." Approximately 200 purchasers of the product at a Lodi, N. J. department store last November were later interviewed by telephone to determine their reactions.

About 80 per cent of the users rated the metered container as "good"; 71 per cent of the users would like to see their present brand of detergent packaged in a metered container; and 69 per cent of the users said they would like to see other products come in a metered container.

Automotive Specialties

(From Page 83)

Hydraulic Brake Fluid

BECAUSE it is a functional part of an automobile, hydraulic brake fluid requires marketing methods different from those for both polishes and cooling system chemicals. Brake fluid is an absolute necessity in an automobile having hydraulic brakes and in addition is consumed in the average car at a predictable rate. Hence, the market for it is assured, steady, and can be quite readily forecast; there is no seasonal factor in the brake fluid market: and total sales of brake fluid can be influenced very little by the techniques employed in impulse selling. Therefore, brake fluid marketing becomes a matter of putting the product in the proper outlets and of maintaining absolute product control to assure proper functioning in the automobile and hence continuing sales acceptance.

Let us consider first the containers used to market brake fluid. Color and design also have an effect on how well brake fluid sells. They function to preserve brand identity and thus to establish acceptance of a particular product; and to catch the customer's eye in competition with the many attractive packages in which mer-

chandise in retail outlets is displayed.

Shape and style of container become very important here, because such a large percentage of brake fluid used is added in increments of two to four ounces, such additions being made frequently from the original container. As a result it is imperative that small containers be easy to pour from and larger containers can be fitted with dispensing devices. It is recommended that brake fluid be marketed in containers from which it can be dispensed directly into the brake system without transfer to an intermediate vessel, in order to prevent contamination.

Since brake fluid is a functional part of an automobile, a large percentage of it is sold and installed by four major types of service outlets: service stations, car dealers, specialty brake shops, and independent garages. Automotive departments in chain stores and auto stores account for a substantial percentage of the brake fluid sold to the do-it-yourself trade, but by far the major portion of the brake fluid market moves through the major service outlets mentioned above. Hence, advertising and promotion efforts are directed to the trade through trade paper and direct mail advertising.

It is doubtful that total brake fluid consumption could be increased materially through incentives to trade personnel, although the sales of a particular brand or grade could undoubtedly be influenced by sales effort directed at topping master cylinders before the fluid in them becomes so low as to be dangerous. Such a sales program would be a real service to the motoring public in the interests of safety.

The marketing of brake fluid is influenced greatly by an arbitrary and inflexible factor — state legislation—, where it exists. Approximately 33 1/3 per cent of the cars in the United States are registered in states which have legislation permitting the sales of

nothing but heavy duty brake fluid, S.A.E. Spec. 70R-1. Such legislation prescribes the minimum quality standard which may be sold, and thus dictates to the marketer the type of product he may offer. Such laws are highly desirable in the interests of safety, and it is hoped that all 48 states will eventually have them.

Until such time as all states have brake fluid laws, one phase of marketing in states without laws becomes that of determining what grades of fluid should be sold; whether only fluids meeting S.A.E. 70R-1 should be offered; what can be done to provide maximum safety for the motoring public.

In the interest of public safety, our industry should find some way to eliminate from the market all brake fluids not meeting 70R-1, as a minimum requirement. I offer this objective as a challenge to CSMA. Isn't there some way we can make certain that only the safest brake fluids are manufactured? We manufacturers have it in our power to give the public the safety it deserves, as far as brake fluid is concerned. Why don't we do it?

The future of the brake fluid business, in one form or another, appears to be bright. The type of product may change if automobile manufacturers adopt a central hydraulic system, but there will still be some kind of fluid activating hydraulic brakes and other hydraulic systems.

The present brake fluid market of about 9,000,000 gallons a year should increase in proportion to the growth of the car population, as long as automobiles retain the present general type of brake system. The big change in the future will be the conversion of the market to 100 per cent heavy duty from its present 55 per cent.

Time does not permit detailed discussion of marketing methods employed in connection with tire maintenance chemicals, windshield chemicals, cements, etc. Suffice it



Inside, outside, all around the building...

here's the handyman to know

It's like having extra help on the cleaning force when you put Atlantic ULTRAWETS to work on factory and institutional clean-up jobs.

ULTRAWET 60L is a superior liquid alkyl aryl sulfonate that works well in hot or cold water, hard or soft water. It increases the efficiency of floor scrubbing, heavy-duty liquids and hard surface cleaners as well as liquid sanitizers...emulsifies grease, speeds soil removal, keeps solids in uniform suspension and leaves no soap scum.

Leading compounders find that ULTRAWET 60L provides uniform high quality and flexibility in the formulation of all-purpose liquid cleaners. In scrub soap formulations it allows the use of a higher phosphate content with resulting clear solutions. Furthermore, it provides excellent controlled pH of alkalinity.

The ULTRAWET product advantages add up to sales advantages for you. Atlantic ULTRAWETS are available in flake, bead and liquid form. For even greater economy, deliveries can be made in bulk shipments.

For more information on our costcutting ULTRAWETS, write, call or wire The Atlantic Refining Company at the nearest office listed.



Philadelphia, Providence, Charlotte, Chicago

In Canada: Naugatuck Chemicals Division of Dominion Rubber Company, Ltd.

In Europe: Atlantic Chemicals SAB, Antwerp, Belgium

In South America: Atlantic Refining Company of Brazil, Rio de Janeiro

to say that such items by nature are not large enough in volume to lend themselves to extensive consumer advertising and promotion. They must be sold to the trade, generally as part of a line of related products, and thus derive their sales momentum from the line as a whole. A possible exception is fuel system antifreeze, which requires intensive promotion because of its seasonal nature.

Style and functional characteristics of containers for some of these items become very important and should be given careful consideration.

It appears to me that many opportunities and challenges face us as manufacturers. I am certain we will find the proper way to meet them and to continue servicing the great automotive industry of which we are a part.

New Oronite Sales Firm

A new company, California Chemical International, Inc., has been formed to handle export sales of Oronite Chemical Co., San Francisco. T. G. Hughes, Oronite president, will also head the new firm, which will have executive headquarters in San Francisco and branch offices in Geneva, Switzerland, and Panama City, Panama.

According to Mr. Hughes, "Oronite's foreign sales have more than doubled in the past five years and now account for more than 20 per cent of the company's total volume. Included among Oronite's export products are "Alkane," a basic detergent raw material, paraxylene, phenol, acetone and lubricating oil additives.

New Acrylic for Polishes

(From Page 171)

plied on the method of latex preparation.

The new acrylate is expected to find application also in shoe dressings, surface coatings, and other specialties. "9425 Acripol" will sell for about 50 cents a pound, dry basis.

Role of Perfumer Symposium Topic

COME preliminary results of studies designed to determine what happens as perfumes age in a product such as soap, alcohol, aqueous dispersions, both alkaline and acid, were reported on by Everett D. Kilmer, chief perfumer of Lever Brothers Co., New York, during the fourth annual symposium of the American Society of Perfumers. In studies of simple blends after aging under accelerated conditions it was found that such reactions as transesterification, alcoholysis, Schiff reaction, acetal formation and others rarely occur in more than perhaps five per cent and perhaps "not even to any significant extent during a year of aging at normal temperatures."

Mr. Kilmer's paper, entitled "Some Technical Aspects of Fragrance Creation," was given during the first of four sections presented at the symposium which was held at the Essex House, New York, March 20.

The program, for which Victor DiGiacomo of Givaudan-Delawanna, Inc., New York, served as chairman, was an afternoon meeting which concluded with a cocktail party and buffet supper.

A plea that "the perfumer be invited to participate in the deliberations leading up to the packaging of a new item" was voiced by Christian Wight of van Ameringen-Haebler, Inc., New York. Surely, no manufacturer can afford to pass by any assistance that will give his product the greatest chance for success in the market place," Mr. Wight said. Speaking in the third section, "Packaging Materials Present Perfuming Problems," Mr. Wight suggested that the nose is still the best means of assessing the extent of odor alteralion.

Some of the reasons why a "shockingly small percentage" of new products succeeded were listed by Frazier V. Sinclair, publisher of Beauty Fashion and Drug & Cosmetic Industry magazines. Reporting on a survey he is making of

over 1200 new products featured in Beauty Fashion magazine in the past five years, Mr. Sinclair pointed out that "a little over 1000 failed." the greatest number of "failures" were "imitations," he said. The second largest group of product "failures" were "gimmicks," and "poor quality" was responsible for the third largest group of "failures." About this Mr. Sinclair declared: "A beautiful package will glamorize and give prestige to a poor product, but it can't make it succeed." Other factors cited for products that failed included "lack of personality," "overpromise on performance," products completely alien to other products in the line or alien to the type of company marketing them, "dispensing failure," and "market inexperience.'

The correct coordination of the product, its perfume, package and theme is the only way a product can succeed, Mr. Sinclair stated. As examples of this he cited the "Early American Old Spice" line of Shulton and the men's toiletries line of John Hudson Moore. Both were outstandingly successful.

Pierre Bouillette of Givaudan-Delawanna, Inc., and chairman of the Society, discussed "Perfume, The Ever-Present Persuader."

We live in a world of odors, and a better world to live in calls for changing objectionable odors into acceptable ones, indifferent odors into attractive ones, good odors into more refined ones, Mr. Bouillette said. In whatever form, under whatever name, in industrial products as well as in cosmetics, in household detergents as well as in toilet soaps, perfume is the "ever-present persuader," proof, in his opinion, that such an evolution is on its way.

Developing a quality perfume demands not only technical knowledge and an understanding of the physical characteristics of perfume materials, but more important, it requires an aesthetic sense and inspiration to use this

(Turn to Page 180)

Why Du Pont's Versatile 90% Methoxychlor Should be Included in Your Aerosol and Oil Spray Insecticide Formulations

- 1. When methoxychlor is combined with pyrethrins and piperonyl butoxide, the result is fast knockdown and high kill! This combination is extremely effective against flying insects and is also a potent contact killer of crawling insects.
- **2.** Methoxychlor in combination with allethrins, synergist 264 and isothiocyanates contributes fast action with good middle and late knockdown plus high kill. These combinations give effectiveness and economy!
- Methoxychlor, when added to synergised pyrethrins, extends activity against garden insects.
- **4.** Now, with the discovery of a new property, methoxychlor is actively synergized by Sesoxane. This combination alone or with other knockdown agents will extend activity still further against roaches and ants, granary insects, black carpet beetles and even aphids and mites.



BETTER THINGS FOR BETTER LIVING

We would like to discuss your formulation plans with you. Write the Du Pont Grasselli District Office nearest you.

Cowles Appoints Evans

Robert F. Evans has been named technical service representative for the laundry chemical de-



Robert F. Evans

partment of Cowles Chemical Co., Cleveland, it was announced last month by W. J. Schleicher, department manager. Mr. Evans primarily will be concerned with development of new laundry chemical products. He previously was associated with the American Institute of Laundering, Joliet, Ill., where he served as a laboratory staff member and instructor.

Shea Sales Higher

Shea Chemical Corp., Jeffersonville, Ind., manufacturer of phosphates and organophosphorus compounds, recently reported a sharp increase in sales and earnings in its fiscal year ended Nov. 30, 1957 to \$20,554,705 from \$10,237,628 in the preceding year. Net income amounted to \$1,873,577, equal to share earnings of \$1.35. This compared with \$747,828 and 52 cents in the 1956 fiscal year. Shea's products are used in the production of soaps, detergents, pesticides and related specialties.

Potash Plans Merger

Merger of American Potash and Chemical Corp., Los Angeles, with Lindsay Chemical Co., Chicago, has been agreed upon by the boards of directors of the two firms, it was announced last month in Los Angeles. The merger plan is subject to approval by stockholders at meetings to be held Apr. 29. American Potash produces numerous industrial chemicals, plus materials used in the manufacture of insecticides and fumigants. Lindsay makes rare earth chemicals and thorium compounds for use in industry.

Under the terms of the merger plan, Lindsay would be operated as a division of American Potash. Holders of Lindsay common stock would receive an equal number of shares of American Potash common. Also, the 125,000 Lindsay shares of seven per cent two-dollar par value stock would be exchanged for 3,750 shares of American Potash new five-dollar preferred no par value stock.

ADM Names Walworth

Appointment of Fred Walworth as manager of the fatty acids department of Archer-Daniels-Midland Co., Minneapolis, was announced recently by Burton W. Schroeder, vice-president and manager of the chemical products division. Mr. Walworth will be responsible for production and sales of unsaturated vegetable fatty acids. He also will continue as manager for domestic marine oil sales. With ADM since 1943, Mr. Walworth served as control chemist in charge of the company's Bayway, N. J. plant before becoming domestic marine oil sales manager in

Fred Walworth



FI'C Apprint: Taylor

Bert S. Taylor, vice-president of FMC Organic Chemicals Division of Food Machinery and



Bert S. Taylor

Chemical Corp., New York, has been named director of marketing and purchasing, it was announced recently by Henry S. Winnicki, Division president. Mr. Taylor will be responsible for all sales and purchasing activities of the division and will make his headquarters in New York.

Mr. Taylor joined FMC in 1951 when it acquired Ohio-Apex Chemical Co., Nitro, W. Va., of which he was development manager. He continued in that post until 1956 when Ohio-Apex Division became part of FMC Organic Chemicals Division, and he was named resident manager of the Nitro plant and division vice-president. As resident manager, he also was in charge of Ohio Apex sales.

Samuel Rudolph Retires

Samuel Rudolph, who for the past 45 years has served as western Ohio sales representative for L. Sonneborn Sons, Inc., New York, last month announced his retirement from active service with the company. He will remain with the firm on a part-time basis as sales consultant. He will be succeeded as western Ohio representative by his son, James Rudolph, who joined the company in 1954 as a sales trainee in Columbus, O., and in subsequent years served as a salesman in that area.

New UBS Polymer

Introduction of a newly-developed acrylic polymer emulsion, designed for use in floor finishes, was announced recently by UBS Chemical Corp., Cambridge, Mass. Tradenamed "U-3050 Ubatol," the product is said to function as a polymer plasticizer, when used in the manufacture of floor finishes, and to improve film toughness and scuff and slip resistance. It is also claimed to increase the depth of

gloss and the water-resistant qualities of the wax.

Day Names Hagen

Theodore G. Hagen has been named sales engineer of the recently established St. Louis sales office of J. H. Day Division of Cleveland Automatic Machine Co., Cincinnati, manufacturers of filling and processing equipment. Mr. Hagen's territory includes Missouri, Kansas, Arkansas and southern Illinois. He



Theodore G. Hagen

has been with Day for 17 years, having worked in the manufacturing, production, service and sales departments.

Leeben Names Three Reps.

Leeben Color & Chemical Co., New York, recently announced the appointment of sales distributors in the following areas: Chas. E. Baker, Inc., Georgia; E. W. Ortenbach, Louisiana; and Dalex Co., Montreal and Toronto. All three representatives will handle Leeben's line of certified colors and industrial dyes.

Perfumers' Symposium

(From Page 177)

knowledge to stir emotion and to evoke a distinctive mood, according to Ernest Shiftan. Mr. Shiftan, vice-president of van Ameringen-Haebler, Inc., took as his subject, "The Prerequisites of a Top Perfume." The technical requirements of a perfume listed by Mr. Shiftan are that it have a harmonious bouquet, be lasting, and be diffusive.

Other speakers and their subjects included: Walter Lengsfelder, president of Fleuroma, Inc., New York, "The Structure of a Perfume—A Basic Approach to the Creation of a Top Fragrance"; Dr. Oliver L. Marton, Shulton, Inc., Clifton, N. J., "Cosmetic Bases—The Perfumer's Concern"; Dr. Paul G. I. Lauffer, Northam Warren Corp., Stamford, Conn., "Perfumes as Cosmetic Materials."



May We Put Some in Your Hands?

The Century Brand Oleic Acids pictured above have the following properties:

	Century 1050 L P White Oleic Acid	Century 1010 Distilled Oleic Acid
Maximum color, Lovibond	5Y/0.5R-51/4"	15Y/3R—1"
Acid value	197—203	195-201
Saponification value	198—205	197—203
Unsaponifiable content	1.5% max.	2.0% max.
Polyunsaturates	3% max.	2.0 /0 man.

We would like you to see our Oleic Acids and compare them critically with other competitive products, so you may fully appreciate Century Brand quality. We invite your comparison of Century Brand Oleic Acids because only you can realize their advantages in *your* products.

A request to Dept. H-30 for samples will receive prompt attention and we will welcome the opportunity to put these better products in your hands.



HARCHEM DIVISION

WALLACE & TIERNAN, INC.
25 MAIN STREET BELLEVILLE 9. NEW JERSEY
IN CANADA: W. C., HARDESTY CO. OF CANADA, LTD., TORONTO

Antifungal Aerosol Spray

Properties and applications of "Vancide 89RE" brand of bactericide and fungicide are covered in two technical bulletins issued recently by R. T. Vanderbilt Co., 230 Park Avenue, New York 17. The product is a purified grade of N-trichloromethylmercapto-4-cyclohexene-1,2-dicarboximide (N-trichloromethylthiotetrahydrophthalimide), said to exhibit good color and odor characteristics. Aerosol formulations incorporating "Vancide 89RE" are said to exhibit good stability. The following general composition is suggested for a dandruff control spray:

	% by weight
"Vancide 89RE"	0.1
Ethyl alcohol	96.9
Polyalkylene glycol	2.0
Lanolin derivatives (water free)	1.0
Propellant	20 to 50

In pressurized hair dressing formulations a larger amount of oil might be required. Similar aerosol mixtures might be considered for use as personal deodorants, athlete's foot preparations, etc.

Stability of "Vancide" in shampoo formulations presents a problem owing to alkaline pH. Fair to good stability is observed in the following non-aqueous shampoo concentrates: "Makon NP-10" (Stepan Chemical Co.); "Sarkosyl LC" (Geigy Chemical Corp.); "Emulphor EL719" (Antara Chemicals) and "Pluronic-F68" or "L64" (Wyandotte Chemicals Corp.).

Sodium Sulfate Price Rise

The detergent grade of sodium sulfate and benzene hexachloride, used in the manufacture of insecticides, were increased in price by major producers on Apr. 1. New prices for the detergent grade of sodium sulfate is \$32 per ton in ton lots, and in 100-pound bags \$36 per ton. This represents an increase of one dollar in the ton price and two dollars in the bag price. The increase in BHG was announced by Frontier Chemical Co., a division of Vulcan Materials Co., Wichita, Kans. The new price is .00825 cents per pound. Last month

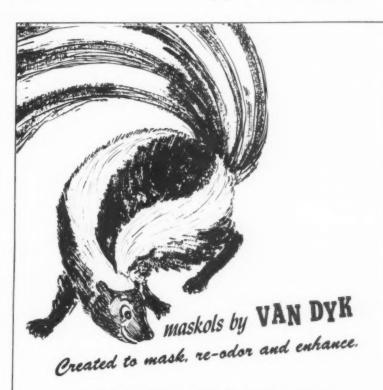
Diamond Chemical Co., Cleveland, announced increases on another chlorinated insecticide, DDT.

William A. Perrin Dies

William Andrew Perrin, former director of Hooker Electrochemical Co., Niagara Falls, N. Y., died Mar. 8 in Tacoma, Wash. He was 90 years old. Surviving are a daughter, Mrs. Gardner Dunton of Newport, R. I.; a brother and a sister.

Acquires Consulting Firm

Foster D. Snell, Inc., New York, recently acquired Davis & Bennett, Inc., Boston, consulting chemists. Terms of the transaction were not disclosed. Benjamin Seibel, who has been with Snell for nine years, has been named laboratory director of D&B, which will operate as a division of Snell. Mr. Seibel recently had been concerned with research and development of paper and fibrous materials.



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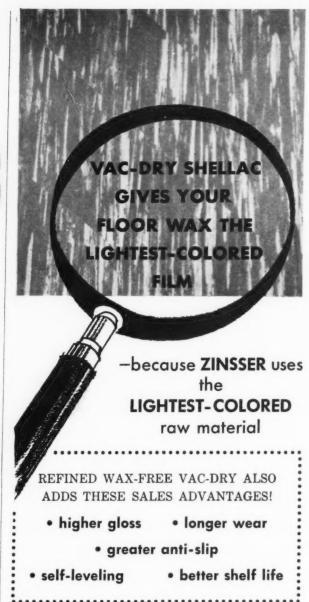
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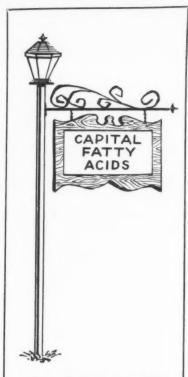


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Hercules in Mexico

A new plant located in Mexico for the production of rosin, turpentine, pine oil, and other terpene chemicals, in which Hercules Powder Co., Wilmington, Del., holds a major interest was opened last month. Corbu Industrial, S.A., near Ciudad Hidalgo, Michoacan, is a Mexican corporation, owned by Hercules and Mexican citizens. The plant has an annual capacity of 25 million pounds. It was formally opened by Albert E. Forster, Hercules president and board chairman.

Packaging Show

(From Page 157)

side, N. J., introduced a new "Rolacoder" conveyor and case-sealer attachment for marking and coding shipping cases automatically on the production line. Also shown for the first time by this firm was a redesigned automatic imprinting attachment for wrapping and bag making machines. This unit, "Series 700 Rolaprinter" can imprint copy legends or codes up to four inches wide by six inches long on any flexible packaging material as it feeds into the parent machine. The imprinter occupies less than one cubic foot and weighs less than five pounds.

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(Reference Books see page 192)

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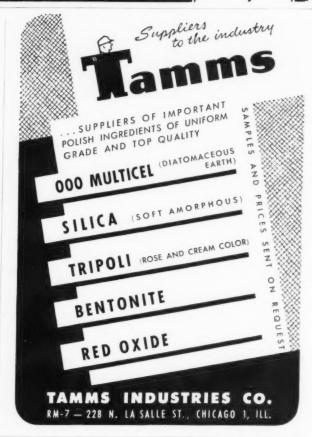
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Adell Appoints Three

Adell Chemical Co., Holyoke, Mass., manufacturers of "Lestoil" all-purpose liquid detergent, re-



Taul E. Thornburg

cently announced three appointments to its sales staff. Paul E. Thornburg will serve as sales representative in Johnstown, Pa., and Wendall T. Kik and Theodore Dekker, Jr., will handle sales of "Lestoil" in Grand Rapids and

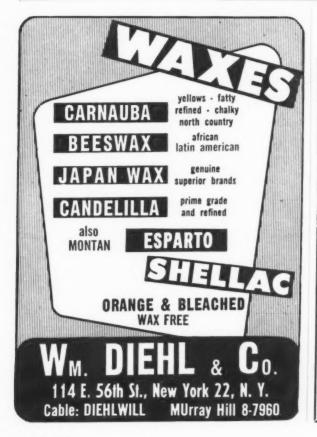
Indianapolis, respectively. The new appointments bring the number of Adell salesmen to 24.

New D&O Fragrances

Dodge & Olcott, Inc., New York, recently announced development of eight new perfume compounds designed for use in sunscreen/insect repellents. The new materials include floral, spice, four additional versions of spice, centifole, violet and bouquet. According to the manufacturer, these compounds already have been tested in both spray and foam type aerosol formulations as well as in standard lotions.

William Massey, sales manager of Adell Chemical Co., Holyoke, Mass., (right) explains facts about "Lestoil" to two new sales representatives, 'heocore Dekker, who will be covering the Indianapolis, Ind., area, and Wendall Kik, (center) who will sell the all-purpose liquid detergent in Grand Rapids, Mich.





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Coming Meetings

American Oil Chemists Society, 49th annual meeting, Peabody Hotel, Memphis, Tenn., April 21-23; short course on soaps and syndets, Princeton Inn. Princeton, N. J., July 14-18.

Association of American Scap & Glycerine Producers, 32nd annual convention. Waldorf-Astoria Hotel, New York, Jan. 27, 28 and 29, 1959.

Canadian Chemical Specialties Manufacturers, first annual meeting, Queen Elizabeth Hotel, Montreal, P.Q., Nov. 13-14.

Chemical Specialties Manufacturers Association, 44th midyear meeting, Netherland Hillon Hotel, Cincinnati, May 19-21; 45th annual meeting, Commodore Hotel, New York, Dec. 8-10.

Industrial and Building Sanitation Maintenance, third show and conference, Sheraton Philadelphia Hotel and Convention Hall, Philadelphia, Nov. 3-6, 1958.

National Hotel Exposition, Coliseum, New York, Nov. 3-7,

National Industrial Health Conference. 13th meeting, Convention Hall, Atlantic City, N.J., April 19-25.

National Packaging Exposition of American Management Association. Coliseum, New York, May 26-30. Packaging Conference, Hotel Statler, May 26-28.

National Pest Control Association, 25th annual convention, Hotel Statler, Washington, D. C., Oct. 20-23.

National Restaurant Association show, Navy Pier, Chicago, May 5-9.

National Sanitary Supply Association, 2nd western trade show and conference. Fairmount Hotel, San Francisco. Oct. 19-21, 1958; 36th annual convention and trade show. Conrad Hilton Hotel, Chicago, April 12-15, 1959.

Precautionary Labeling Conference, Manufacturing Chemists' Association, Shamrock Hilton Hotel. Houston, Tex., Apr. 30,

Premium Buyers Exposition. 25th annual show, Navy Pier, Chicago, Apr. 14-17.

Premium Advertising Conference, Sheraton Astor Hotel, New York, Sept. 8-11.

Salesmen's Asociation of American Chemical Industry, golf outings, May 20, June 26, July 22, Aug. 19 and Sept. 18. Sales clinic, Roosevelt Hotel, New York, Oct. 20.

Society of Cosmetic Chemists, spring meeting, Hotel Commodore, New York, June 4.

Synthetic Organic Chemical Manufacturers Association, monthly luncheon meetings, Roosevelt Hotel, New York, April 8; annual outing, Shawnee Inn. Shawnee, Pa., May 26-28.

Toilet Goods Association, 23rd annual convention, Poland Spring House, Poland, Me., June 25-29; scientific section, Waldorf Astoria Hotel, New York, June 5.

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Eale Ends

THE unemployment problem at the San Quentin, California, state pen is really getting acute these days. They have 4.000 inmates and work for only half of them. Now, the prison is about to open a new plant for making detergents and soaps, only to find out that the number of men required to run such an operation is very small, too small to amount to much in the prison labor situation. Anybody in the soap industry could have told the prison people the facts long ago if they had just asked.

Mailing of soap and cleanser samples to his constituents has aroused the ire of a California congressman and he has introduced a bill which would require that any and all samples carried by U.S. Mails would have to be sent first class mail. This of course would boost mailing costs sharply and practically push mail samples out of the picture. Chances are that the bill will meet the fate of the wax cat being chased through hell by the asbestos dog.

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Not once, but twice! Twice in one issue in February, we misspelled "Gleem" Tooth Paste, once on the first text page of the issue and once right here on this page. W. E. Williams, president of Procter & Gamble of Canada took us to task for the error and mentioned that we must have tried real hard to make the same mistake twice in one issue. And that there was not much excuse for a publication devoted to the industry making such a boo-boo. Our abject apologies. Bet we never misspell "Gleem" again!

... And it wasn't twice but actually THREE times that we muffed the spelling of "GLEEM" in our February issue writes Howard H, Besuden of P&G's public relation's department. As a gentle (Ouch!) reminder Howard stapled one side of a carton of the product to his letter. Anyway we're still sorry about the boo-boo.

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A new kind of advertising, said to have been used for some time in Europe, has made its debut in Vancouver, Canada. A firm by the name of Missile Advertising is trying out the stunt which is to shoot a "bomb" into the air from a large mortar. At about 500 feet, the ad bomb, a nine-inch diameter "satellite", disintegrates and exposes the advertised product in mammoth proportions. It is said to work real well with facsimiles of soap bars or packages and foods.

Last month, the hot rumor around the chemical circuit was that Shea Chemical, phosphate producer, was to be taken over by Hooker Electrochemical. It was a big deal involving some thirty million in Shea assets. All that was left to do, we heard, was for the Hooker board to okay the deal and Hooker was in the phosphate business. But the Hooker board met last month and nothing happened,—

or apparently so. We had our ear close to the ground, but heard nothing further.

An outbreak of hoof and mouth disease nearby recently caused the closing of the vast grounds of historic Windsor Castle in England. The object of closing the great park was to protect two large herds of Fresian cattle which occupy the area. Visitors on official business to the castle grounds had to dip the soles of their shoes in a disinfectant solution before entering the premises.

Latest screwpot to get loose in New York was a naked man who invaded a supermarket and strolled about the place with one of those food push carts. When the cops finally caught up with him, he was chewing on a bar of soap and foaming a little at the mouth. He fought like a demon when they tried to put a butcher's apron around his naked middle. A few dozen women present in the store fled the premises screaming. Later most of them were noted peeking through the windows

from outside. The nutty soap eater ended up in the psychiatric ward, Moral: Watch where you eat your soap.

Practically the complete cutput of a new soap factory in Israel is being sold in neighboring Arab states in spite of a stringent boycott against Israeli products there, says a news item from Tel Aviv. The soap which broke down the Arcb boycott is transparent and imbedded in each cake is a picture of a nude woman. The soap goes to Europe first and then is transhipped to the Arab countries. If things get dull in the American soap business, it's an idea and the soap sources.

Who's top dog in the U.S. in the sale of cosmetics and toiletries? The Avon-Revlon battle for the No. 1 spot which has gone on these several years past continues apace with Avon still ahead in 1957 with over 100 million in sales and Revlon with 95 million. In 1956, Avon led Revlon by only one million dollars, 86 to 85, but Revlon was slightly ahead in profits. In 1957, Avon topped Revlon in profits by a few hundred thousand. This was the first year in which any manufacturer of cosmetics and toiletries reached or exceeded 100 million in sales.

Cordial



A CORDIAL welcome is more likely to greet your salesmen if firm and products are known in advance of his call. Regular advertising can help plenty. Now if it be among manufacturers of detergents, soaps, cleansers, aerosols, insecticides, floor products, automotive chemicals and other chemical specialties where you want your men to receive a cordial welcome, try advertising in

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3月3月3月

Bakeries and Other Food Areas Demand Non-Hazardous Pyrenone* Insecticides

other toxic agent presently available to bakery and other sanitarians is so effective...yet so demonstrably safe...for direct application in sensitive food areas as the Pyrenone concentrates.

Even against "resistant" flies and roaches, the Pyrenones yield fast knockdown and high kill. That's because pyrethrins in combination with technical piperonyl butoxide, the active ingredients of Pyrenone, act together to deliver a lethal one-two punch. Fact is, butoxide steps up the killing power of pyrethrum at least 10 times. What's more, this

time-tested synergist is equally as safe as pyrethrum, if not more so.

Remember, Pyrenone-type insecticides are available in spray or powder form, for any permissible use in bakeries, dairies, food warehouses and food processing plants.

For complete information on Pyrenone or other non-hazardous compounds, such as, piperonyl cyclonene . . . pyrethrum . . . allethrin . . . and rotenone . . . contact Fairfield Chemical Division. Branches in principal cities. In Canada: Natural Products Corporation, Montreal and Toronto.

*Reg. U. S. Pat. Off., FMC.

Pyrenone



FOOD MACHINERY AND CHEMICAL CORPORATION

Fairfield Chemical Division

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